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## AMIENS 1918

General Erich Ludendorff:  
'A BLACK DAY FOR GERMANY'



# WAR MONTHLY

ISSUE 11

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*Squat and malevolent, this French 370mm (14.5in) siege howitzer, about to fire from a position at Ravin de Proyart, during the Somme battle, 24 June 1917. Rate of fire was one round in two minutes, the 250lb shell going five miles. Crew was 16 men. The gun weighed 30 tons. Loading was done by crane and trolley, just visible on the right.*

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# E-BOATS

**Fast, heavily armed—a potential grave danger to Allied shipping. But High Command got its priorities wrong**

The E-boat commander aimed his torpedoes at the British cruiser *Newcastle*, only 400 yards away. A searchlight caught the German torpedo-boat in its glare as the 'tin fish' were fired. Thunder rumbled across the dark sea as the E-boat's 4,800bhp engines crashed into life. The torpedoes exploded, ripping a hole in the *Newcastle's* bows. And her attacker retreated at high speed.

Designed and built in secret, the E-boat was to become one of the most effective fighting vessels in the German navy. Right from the start of World War II, these small fast ships were put into action. How was the E-boat developed and what was its combat role?

The nearest thing the Allies had to an E-boat was the motor-gunboat (MGB). The officer mainly responsible for the development of this craft was Lieutenant Commander

Robert Hichens. Shortly before he was killed in action, on 13 April 1943, he attended a tactical conference. High on the agenda was the desirability of capturing an E-boat intact, so that full details of the enemy craft would be available to the men who would probably meet it in battle.

Before the conference began, Hichens was idly browsing through the 1938 edition of 'Jane's Fighting Ships', an international reference book. In his posthumously published work 'We Fought Them in Gunboats' he recounted what he saw. 'Suddenly, before my incredulous eyes was an admirable photo of an E-boat . . . It was the advertisement of a German shipbuilding yard proclaiming their wares . . . the world's fastest diesel-driven torpedo boat . . . "Come see, come buy!" The Admiralty could have bought as many E-boats as they wished; indeed were pressed to do so, but



*The small, fast and heavily armed E-boat was devastatingly effective in combat. Moving in under cover of darkness E-boat flotillas dealt quick and savage blows to Allied convoys before retreating swiftly into the night.*



► The S13 was completed at the end of 1934 along with seven others (S6 to S12). These were larger and better armed than S1 to S5. Because of the increase in size the later E-boats were slightly slower than the earlier models, but they could still manage an impressive 35 knots. Better accommodation was provided for the crew of 21.

▽ HMS Newcastle was amongst the many to suffer the ferocity of an E-boat attack. She was escorting convoy 'Vigorous' bound for Malta on the night of 14 June 1942 when a torpedo from Lt. Wupperman's S56 smashed through her bows.



Imperial War Museum

one short year before the outbreak of war . . .

The term 'E-boat' is probably an abbreviation of 'Enemy (War) Motorboat'. It was somewhat loosely applied during World War II to describe small German and Italian warships—ranging from launches to minesweepers. The name, however, should only properly be used to describe *Schnellboote* (quick-boats), which were designated by the prefix 'S' followed by a serial number.

During World War I, Britain—along with Italy—had been one of the first powers to put torpedo-carrying motorboats into service. Between 1919 and 1935, however, such craft were neglected by the Royal Navy. Their development was left to the Italians, a Mediterranean power with an obvious requirement for such boats, to more easily detect and destroy enemy submarines in the clear shallow waters, and to the Germans, whose interest in small craft was of a rather different order.

The Treaty of Versailles, between Britain, America and France, imposed after World War I, sought to ensure that Germany could never again match the firepower of the victorious powers. Not only did the treaty rigidly control the construction of major warships, it forbade Germany to build destroyers of more than 800 to 900 tons or torpedo boats exceeding 200 tons. Similar restrictions applied to the *Luftwaffe*, who were forced to turn to 'private' flying and gliding clubs to train pilots and experiment with aircraft.

In 1928, officers of the *Kriegsmarine* began to display considerable interest in a luxury cruiser. Ordered by a wealthy American, this craft was powered by three Maybach engines and of hard-chine construction (single angle between side and keel)—thus cutting the slowing effects of water 'drag' to a minimum. This rich-man's toy became the basis of the E-boat.

The first of the E-boats, S1 of 1930, was powered by three units of 1,000bhp each, giving a maximum speed of 37 knots, as were five similar boats built in 1932. By 1934, however, the development of the 1,320bhp Daimler-Benz diesel unit which had the added advantage of being less subject to fire risk than a gasoline engine necessitated the construction of larger boats. Eight of these, number S6-S13, were completed by the end of the year. They were round-bilge craft (two or more angles between side and bottom, giving the completed hull a rounded appearance), 106½ft overall and weighing 78-80 tons. Extra size entailed a slight speed reduction—a maximum of 35 knots, with an action radius of 600 miles at 30 knots—but heavier armament, a 20mm AA gun instead of the light-machine-gun of the 1930-32 boats, and better accommodation for a crew of 21, including an enclosed wheelhouse. In opposition, the British Navy had about the same number of MTBs. These 'Vosper' boats were smaller than the German craft, being between 60 and 72ft long—and were less well armed.





Raymond V. B. Blackman

It seems that in January 1939 Hitler had persuaded his Naval High Command that the E-boat would not have to face battle until 1944 at the earliest. It was on this assumption that he approved the 'Z Plan' for construction. This called for only 90 torpedo-boats and 249 U-boats.

But from the very first day of the war E-boat flotillas were in action in the English Channel and the North Sea. E-boats were designed for speedy, dramatic and aggressive attack. In those early days of the war, however, they had a less spectacular, but no less effective, function to perform—mine laying. Under cover of darkness, they placed magnetic mines on the seabed in harbor approaches and shallow waters. From 1941 onwards, E-boats placed the lethal acoustic mines along British convoy routes. These responded to sound vibration from ships and cocked themselves when any vessel passed over them. Once cocked, they would explode beneath any vessel that happened along within the next four days.

Occasionally, E-boats combined mine-laying with torpedo attacks. E-boats carrying mines would drop their deadly cargo in the path of an approaching convoy. When the resulting explosions had thrown the convoy into confusion, a second group would move in for the kill with torpedoes. This tactic was fairly successful. In the first few months of the war no fewer than 114 British merchantmen, totalling about 400,000 tons, were sunk. In 1940, 201 merchantmen were destroyed—representing very nearly 510,000 tons of shipping.

The E-boat really came into its own at Dunkirk. Britain's ignominious retreat was at least partly due to the heavy damage caused to Allied shipping by E-boats. First to suffer was the French destroyer flotilla which was inflicting considerable damage on the *Wehrmacht* in ship-to-shore actions at Boulogne. Lieutenant Gotz von Mirback in S21 and Lieutenant Christiansen in S23 torpedoed and sank *Jaguar* on the night of 23-24 May 1940. Few days afterwards—on 31 May—Christiansen and Lieutenant Fimmen in S26 crippled the *Sirocco*, leaving her to be finished off by divebombers.

Probably the hardest blow suffered by the Royal Navy during the evacuation was struck by Lieutenant Zimmermann in S30 in the early morning of 29 May. Zimmermann

blew apart the old destroyer *Wakeful*. The minesweeper-drifter *Comfort* went to the rescue but only managed to pick up a handful of the 700 soldiers stranded in the water. Worse was to come. A U-boat and S25 moved in to attack the modern destroyer *Grafton*. She was hit and sunk by a torpedo from the U-boat. In the near-darkness the sinking *Grafton* and the minesweeper *Lydd* mistook the low-lying *Comfort* for an E-boat. They unleashed a savage barrage of heavy fire on her, and even started machine-gunning her survivors in the water after *Lydd* had finished the job by ramming.

The sinking of the unarmed liner *Meknes* became a grisly sequel to Dunkirk. On the night of 25 July 1940, she was carrying 1,100 French sailors for repatriation to Vichy, France. She cleared Portland Bill with all lights blazing to proclaim her neutrality when she was torpedoed and sunk. Lieutenant Klug in S27 was responsible. The Germans claimed they were in strict accordance with international law as they had not been told of the sailing. Some 400 men died.

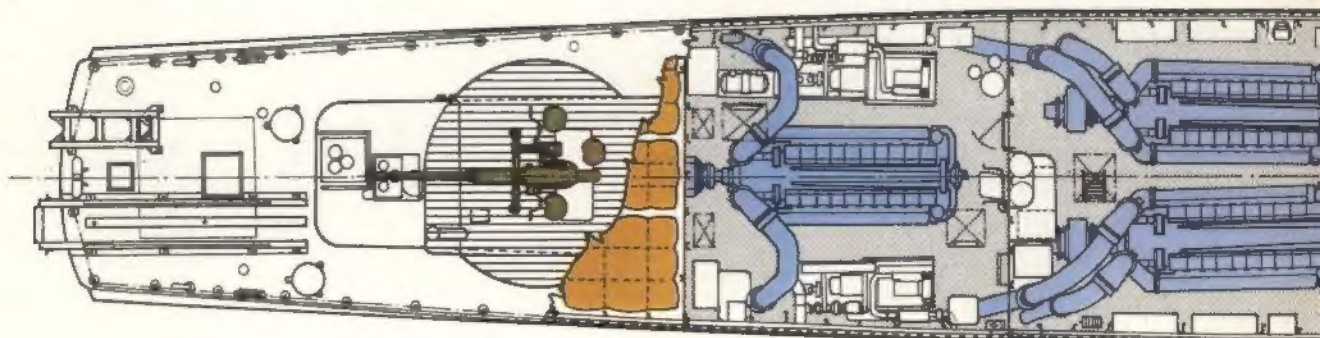
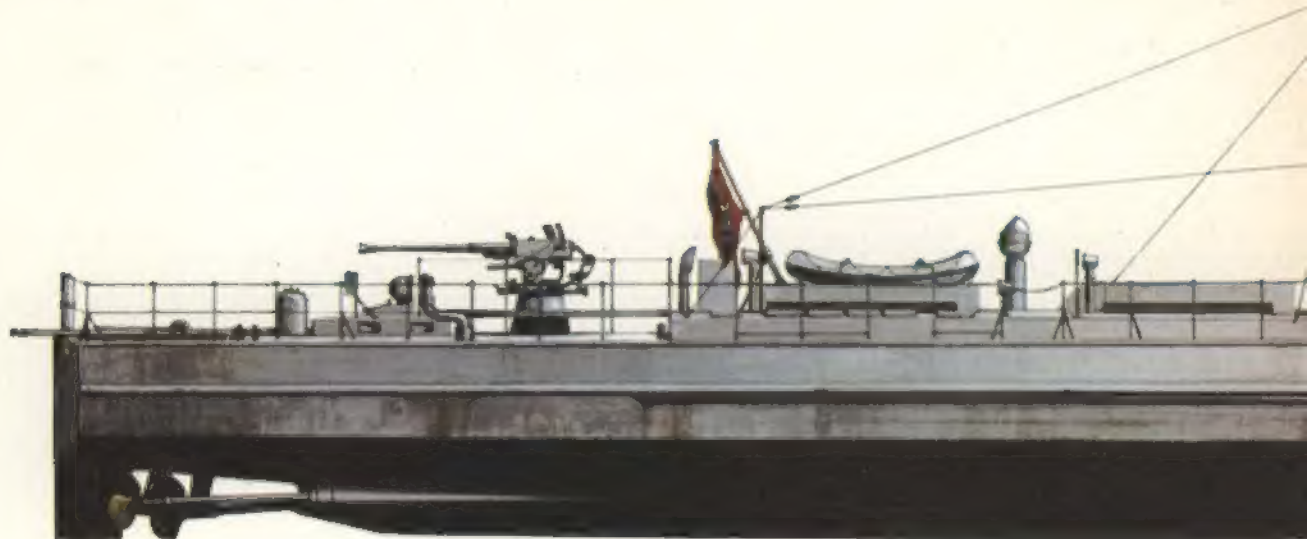
After Dunkirk, the E-boats had a dual function. One was to push Britain down the road to defeat by wrecking her coastal trade, while the other was to lure the fighters of the RAF out to do battle with the *Luftwaffe*. If the RAF could be weakened, the invasion of Britain—Operation Sea Lion—would be made so much easier. But British Fighter Command were aware of the German intentions, and refused to let its fighters be drawn into combat. It did mean exposing merchant shipping to attack but the strength of the RAF was of greater importance.

The Battle of Britain convinced the Germans that Operation Sea Lion was not on. This allowed the British to provide more air cover for her vital coastal convoys. Convoy CW9—25 merchantmen sailing westbound from Southend on 7 August 1940—was one of the lucky ones that received RAF protection even before the repulse of the *Luftwaffe*. An 'umbrella' of Hurricanes kept the Stukas off by day. But when darkness descended, it could do nothing to save the convoy from a typical E-boat attack. At 0300 on 8 August E-boats S20, S21, S25 and S27 lay in wait, their engines switched off, in the swept channel off Beachy Head.

In the darkness, the men of Convoy CW9 suddenly heard



## E-Boat Type S38



the roar of crash-started diesel engines 1,000 yards distant. As the E-boat raced in for the kill, destroyers escorting the convoy lit them up with star-shell and tracers. Gunners on the merchantmen opened fire on the elusive, low-lying targets. The attack was over as quickly as it had begun and the E-boats retreated. Even so, in that short sharp clash, the E-boats had caused considerable damage. The freighters *Fife Coast* and *Holme Force* were holed by torpedo hits and were sinking rapidly. Another freighter, *Ouse*, was doomed after colliding with the minesweeper *Rye* while dodging a torpedo track.

By late 1942 and onwards, the initiative in the battle of the 'Narrow Seas' had increasingly swung away from the E-boats. The Allies' radar was far superior, and their air superiority was growing. From 1943, Beaufighters and rocket-firing Typhoons began to claim E-boat victims. Heavy bombers of the RAF and USAAF attacked E-boat bases with ever-increasing frequency.

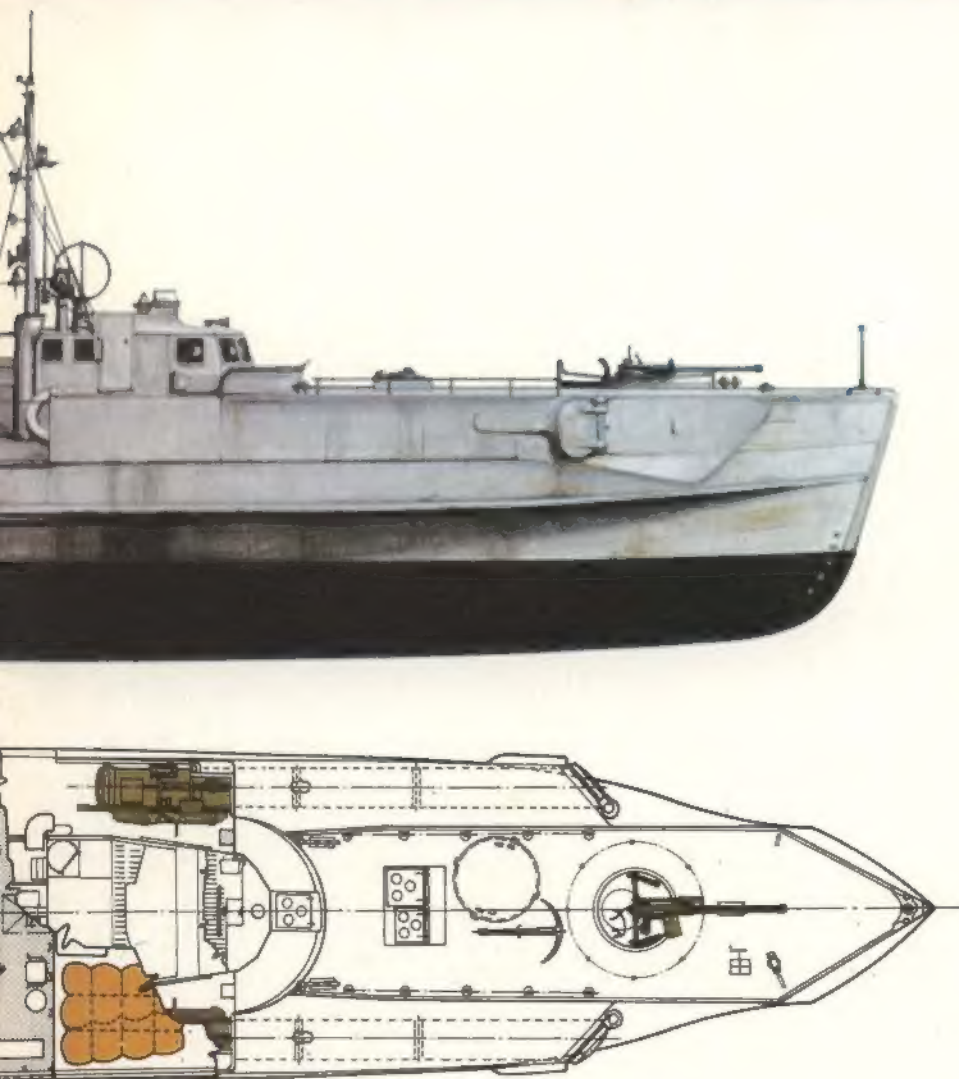
By the end of 1942, British Coastal Forces had a strength of 14 MTB flotillas, 13 MGB flotillas, 50 MLs and one SGB (steam gunboat) flotilla. In opposition, the Germans had eight E-boat flotillas of up to 12 boats each. Added to this,

during 1943 and early 1944 only 35 new E-boats came into service. In 1943 British and Norwegian MTBs operating from the Shetlands were deployed off Norway. The hope was that the Germans would anticipate an attempted Allied invasion there rather than off the French coast. By the end of the year it seemed certain that the Allies had the upper hand in the 'Narrow Seas'. But the E-boats were to hit back.

In June 1941, the E-boat was to play a central role in 'Barbarossa'—the German invasion of Russia. At 0300 on 22 June, when the invasion was only minutes old, *S59* and *S60* (Lieutenant Wuppermann) opened the E-boats' Baltic campaign. They torpedoed the 3,000-ton Latvian steamer *Gaisma*. On that morning, other E-boats were attempting to seal off the seaways between the Gulfs of Finland and Riga by dropping mine barrages. The mines claimed more victims than torpedoes—as they did in the English Channel and the North Sea. By early October, what remained of Soviet Naval strength was securely bottled up in Kronstadt at the easternmost end of the Gulf of Finland.

With the Russian fleet safely trapped, there was now more need of the E-boats' services in the Black Sea, where the Russians, having been driven from Odessa, were





*The diagrams show side and deck plans of the E-boat S38. Built in 1942, each of her three Daimler Benz diesel engines was capable of producing a remarkable 4,800bhp—giving her a top speed of 35 knots. E-boats of this series were equipped with two enclosed torpedo tubes forward (shown in green on the deck plan). In this it differed from the British Vosper MTB, which was fitted with exterior tubes. Soft fuel tanks were carried below deck (shown in yellow on the deck plan). Two tanks (not shown) carrying 2,000 litres each, were situated in the stern. Three more tanks were positioned immediately aft of the engines (blue on the deck plan) and two more either side and below the bridge. The tank in use in the middle of the row had a capacity of 1,450 litres, while the two on either side held 3,150 litres of fuel. The S38 was armed with a 20mm cannon fore and a 40mm gun aft (green on the top plan). Eight mines could be carried at the stern.*

Peter Simon/Tony Bryan

hanging on grimly to the Crimean fortress port of Sevastopol. It was impossible for the E-boats to make the journey via the North Sea, the English Channel and the Mediterranean. Instead, they were taken into the Elbe estuary and up-river to Magdeburg. Once there, they were lifted from the river by cranes and lodged securely in 'cradles' on specially built 64-wheeled transporters. An overland journey of several hundred miles followed—to the Danube near Regensburg. Still far from the sea, they now voyaged down-river through Austria, Hungary, Rumania, Bulgaria and the Ukraine. Eventually they reached the 1,000-square-mile delta on the Black Sea at the end of the Danube's 1,700-mile course. The E-boats that undertook this marathon—the 1st Flotilla commanded by Lieutenant Commander Birnbacjer—were not finally ready to go into action until June 1942.

After such a long journey, it was unfortunate for the Germans that the record of the Black Sea E-boats against enemy warships was less than brilliant. Once again, their main task was mine-laying, although they also harassed Russian convoys and sometimes gave valuable help to the *Wehrmacht* in ship-to-shore actions off Novorossisk. Some E-boats even experimented with mounting 'Stalin's organ

pipes'—multi-rocket launchers captured from the Red Army—though without recorded success.

In late 1943 and 1944, when the tide had turned against Germany, came the E-boats' most important contribution to the war. The Russians were fighting their way back across the Kerch Strait towards Sevastopol. It was now the Germans' turn to be under siege. E-boats were pressed into service in the twin roles of escort and transport. Thousands of German soldiers and civilians were lifted, first to Sevastopol, and then away from the Crimea—to Constanza, Rumania. Between 12 and 16 April 1944 no fewer than 70,000 evacuees were moved out. Thirteen E-boats provided a mobile AA screen. They did the same job from 17 April to 4 May when 42,000 troops were taken out of Sevastopol. The end came in the Black Sea on 30 August. After heavy losses during the retreat from Constanza a week earlier, four E-boats went down. They were among the 200 or so other small craft of the German Black Sea Fleet to be scuttled by their crews off Varna, Bulgaria. By late September, E-boats of 5th flotilla and others had evacuated about 50,000 troops and 85,000 civilians to the temporary safety of the southernmost Baltic islands.





Imperial War Museum



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Early in 1945, E-boats were to play what was probably their most decisive role of the whole war—certainly it dwarfed the effort at Dunkirk. The Russian advance had trapped more than 500,000 German troops in isolated strongholds on the Bay of Danzig. Between 26 February and 18 March E-boats and other vessels of the 5th Gun-Carrier Flotilla managed to evacuate more than 75,000 Germans from Kolobrzeg, Poland, under heavy and sustained air attack. Similar operations at other pockets around Danzig Bay succeeded in bringing out 1½ million refugees before the last vestiges of the *Wehrmacht* finally surrendered their beach-heads on 9 May.

In June 1940, Italy entered the war with what was, by any standards, an excellent modern navy. This included E-boats—known by the Italians as MS or MAS boats. They were extremely fast and adequately armed. It is generally accepted that faults high in the chain of command were the main cause of the Italians' failure to maintain the vital supply lines between southern Europe and the Axis forces in North Africa, while at the same dealing with an outnumbered Allied fleet.

In October 1941, the first U-boats entered the Mediterranean, followed soon afterwards by the first E-boats. The U-boats slipped unobtrusively through the Straits of Gibraltar. The E-boats' entrance was less orthodox—but equally secretive. First to arrive was the 3rd Flotilla, stripped of their guns. Gaily painted dummy funnels and ramshackle wooden wheel-houses concealed their compact bridges and broke their sleek lines. They slipped through the canal network of Germany and France disguised as tugs. Their

journey ended at the Ligurian arm of the Mediterranean at La Spezia—north Italy's major naval base, 50 miles south east of Genoa.

Both the U-boats and E-boats had one main target—Malta, the defiant Allied fortress-island. Germany's plan was to starve the island into submission by submarine and surface actions against its supply convoys, by encircling mine-fields and by constant air attack.

The 3rd Flotilla's part in the campaign began on the night of 15–16 December, 1941, when five E-boats left Sicily for the 120-minute, 60-mile run to Valletta Harbour approach. That night they dropped 70 mines there. Throughout the spring of 1942 the E-boats kept at the same job. They lay mixed barrages of mines, protected by explosive floats that wrecked the gear of the island's dwindling fleet of sweepers. In the summer of 1942, the E-boats were sent against the Allied supply convoys.

Late in the evening of 14 June 1942, six E-boats led by Lt. Wuppermann in S56 struck at convoy MW11, code-named 'Vigorous'. Some idea of the opposition the Malta convoys expected to meet, and the importance attached to pushing them through can be gained by studying CW11's composition. Altogether there were 26 destroyers, 13 submarines, eight cruisers, several minor warships and a 'battleship'—the 1911 vintage *Centurion* rigged with dummy guns and funnels. While this force headed west out of Alexandria, the east-bound convoy 'Harpoon' sailed from Gibraltar. This was even more heavily defended than 'Vigorous', having two real battleships, three aircraft carriers, seven cruisers, 32 destroyers and eight submarines as



◁ In opposition to the E-boat, the British Navy was equipped with Vosper MTBs. These, however, were no match against the German craft—being much smaller and less well armed. The Vosper MTB (top) is shorter and has less sleek lines than the E-boat (bottom). Although the E-boat was a far better fighting weapon than the Vosper, the Allies gained the upper hand by sheer weight of numbers.

▷ The engine room of an E-boat. A German maintenance officer checks one of the huge 4,800bhp diesels.

▽▷ A careful watch for the enemy.



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R.H.L.





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*This E-boat, the S111, was one of many to be attacked in the English Channel as D-Day approached. A number of her crew were killed or injured and British Coastal Forces took seven prisoners. The hull shows the crippling damage inflicted.*



Imperial War Museum

*By June 1944 the strength of the Allied armada was overwhelming. Many E-boats, despite their combat effectiveness, were forced to surrender in the face of such odds. Here, an E-boat flying a white flag, is boarded by the British at Felixstowe.*



escort. Such was the importance of Malta.

Wuppermann's E-boats were picked up by radar on the escorts of 'Vigorous' as they made a cautious approach towards the rear of the convoy. The escort defended with heavy fire and the E-boats responded, as usual, by retiring at speed. 'Vigorous' might now have been rid of the E-boats had not Admiral Vian, the convoy commander, been advised from Alexandria to take evasive action against a supposed sortie by Italian heavy units from Taranto. The maneuver of turning 50 ships of widely varying types in darkness was performed with commendable efficiency. But unfortunately the new course put 'Vigorous' right back among the E-boats.

Wuppermann could hardly believe his good luck as the warships he had 'lost' suddenly loomed out of the darkness all around him. As lamp signals called on him to identify himself, the E-boat commander lined his torpedo tubes up on the largest ship in view—400 yards away. A searchlight was aimed at the E-boat. The German was unmasked and alarm bells began to scream in the British ships. Wuppermann fired both torpedoes and swung away with S56's 4,800bhp diesels at full power. As Wuppermann cut through their lines, the British fire slackened for fear of hitting one another. The exploding torpedoes ripped a hole in the bow of the cruiser *Newcastle*. Wuppermann escaped unscathed. Luckily, *Newcastle* was able to remain operational, but as the destroyers cast around in the dark for the fleeing S56, Lieutenant Horst Weber in S55 was able to put two torpedoes into *Hasty*. The destroyer was so badly damaged that her consort *Hotspur* had no other choice but to take off her crew and complete the destruction that S55 had begun.

One of the danger areas for Mediterranean convoys was 'The Narrows'—the channel between the Italian island base of Pantellaria and Cape Bon, Tunisia. Here, restricted sea space was made still more dangerous by minefields. It was here that 20 Italian MS boats and four E-boats attacked the convoy 'Pedestal' just after midnight on 13 August 1942. Over a four-hour period, the Axis boats attacked no fewer than 15 times. Groups came in at speed on different flanks, launched their torpedoes and made smoke to cover their withdrawal. For once, the popular image of E-boats in action was the true one.

### Range was too great

At first, the fire-power of a strong cruiser and destroyer escort kept the E-boats at a far too great a range for effective torpedo work, but after two Italian boats closed to within 50 yards to wreck the cruiser *Manchester* the attackers became more daring. Transports totalling 30,000 tons were sunk. The sufferings of 'Pedestal' convoy was to be rewarded, however, when battered, near sinking, the tanker *Ohio* limped into Valletta Harbour with fuel-oil vital to Malta's survival.

By 1943, the war had swung against the Axis. In the Mediterranean, British and Commonwealth small warships had been reinforced by United States PT-boat flotillas. The Axis had lost Tunis, Bizerta and Sicily. Paradoxically, the fall of Italy strengthened the E-boats. They were able to seize quite a few Italian craft, including the original S2-S5 built for Yugoslavia and captured by Italy in April 1941. The confusion that followed Italy's collapse gave Lieutenant Degenhard-Schmidt, commanding S54, the chance to perform one of the strangest feats of World War II.

While returning from a minelaying mission, Schmidt

attacked and destroyed an Italian destroyer—the *Sella*—and made a 'prize' of the troopship *Leopardi*. Fuel was running low, so Schmidt was forced to put into Venice. Here he pulled a colossal bluff. He informed the authorities that his craft and her fellow E-boat S67, were the vanguard of a strong squadron on its way to 'punish Italian treachery'. Schmidt then demanded that the city should surrender to him forthwith. The E-boats lay at Venice for a week and actually received the surrender of a number of small warships as well as some 5,000 troops. Just when it seemed the Italian authorities were about to catch on, the *Wehrmacht* arrived in force and saved Schmidt's face.

E-boats were to return to the North Sea and the English Channel in 1944 as the Allies were preparing for the invasion of 'Fortress Europe'. Air and radar superiority as well as weight of numbers were firmly on the Allied side. The E-boats' old tactics were futile against the greatly increased escort forces at the Allies' disposal. Mass attacks became more and more common. E-boat flotillas often combined with R-boats—large motor launches used for minesweeping, minelaying and convoy escort—and motor-minesweepers in combat groups of 30 to 40 strong. Although new E-boats were coming into service, their numbers were tiny against the combined might of the Allies. Between 1939 and 1945, the *Kriegsmarine* brought just 244 E-boats into service. In the same period, British Coastal Forces alone put 1,700 similar craft into service.

### Beaten by sheer fire-power

During the build-up to D-day, E-boats fought with far more ferocity than they had displayed earlier in the war. They suffered heavier casualties as a result. More frequently, E-boat sorties had to be called off because Allied radar warning had brought out interception forces in overwhelming numbers. Collisions became increasingly common. This was due to the use of large combat groups. When news reached the Germans of the Allied armada heading for the coast of France on 6 June 1944, only about 30 E-boats were still in operation. They set out from their bases, only to be beaten back by torpedo bombers, rocket-fighters, or the sheer fire-power unleashed by the huge escort forces.

Minefields protected the flanks of the invasion fleet. Although E-boats scored few successes against landing-craft, their own losses were heavy. Apart from heavy damage from Allied escort forces, the E-boat flotillas were pulverized by air attack.

By now the E-boats were virtually finished as an effective fighting force in the 'Narrow Seas'. They attempted a few raids from their dwindling number of bases, but they were only of nuisance value.

The E-boat was an excellent fighting machine. It is probably true that their influence on the war at sea would have been greater had there been more of them. Like the U-boat, their failure stemmed from lack of numbers—a result of poor planning in the German high command.

Incompetence in planning penetrated to the highest level. Hitler was interested only in super-battleships and V-rockets. Goering failed to give priority to the development of long-range bombers and, later, jet aircraft. Admiral Raeder, the 'traditional' sailor, did not grasp the full capabilities of U-boats and small surface craft such as the E-boat. Had he done so, Operation 'Sea Lion' would surely have gone ahead and the world would be a very different place today.

Richard O'Neill



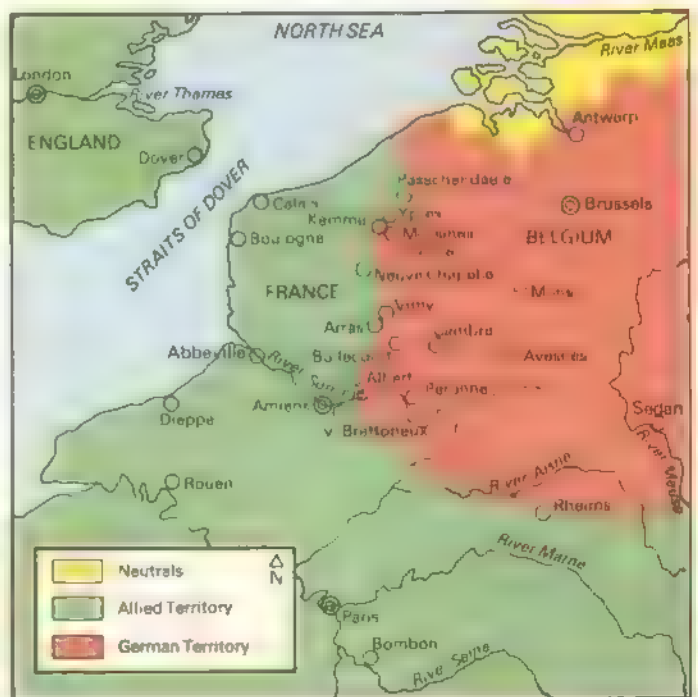


# AMIENS 1918

**What might have been just another blood-bath, Amiens heralded the end of the Kaiser's great war machine**

'In black darkness, 100,000 infantry, deployed over twelve miles of front, are standing grimly, silently, expectant, in readiness to advance, or are already crawling stealthily forward to get within 80 yards of the line on which the barrage will fall; all feel to make sure that their bayonets are tightly locked, or to set their steel helmets firmly on their heads; company and platoon commanders, their whistles ready to hand, are nervously glancing at their luminous watches, waiting for minute after minute to go by . . . ' The greatest British tank attack and the most modern offensive of World War I was about to be unleashed. It was to mark the beginning of the end for Germany's hopes of achieving stalemate on the Western Front in 1918.

A few weeks earlier, the situation had been very different. Only a commander of iron nerve could have stood the strain of the Ludendorff Offensive, Germany's supreme effort of the spring and summer of 1918. Field-Marshal Sir Douglas Haig's conduct of operations in 1917 was under scrutiny on the grounds that he had attacked in the wrong place, at too great a cost for too long. His actions had been and would continue to be the subject of criticism. Now in mid-July 1918, with a new more competent Chief of Staff, he was receiving better intelligence advice than he had before. A new spirit reigned at GHQ Montreuil and Haig himself







△ It was a 'Black day' for Ludendorff and the Kaiser, but these German POWs, assembled for transit to Abbeville, seem almost cheerful. Amiens' first day yielded 15,750 prisoners in a morning—first of 188,700 Germans to surrender to the British in the four months up to Armistice Day. This total, nearly half the Allied catch, was half the loss caused by the British. Amiens began a slow but sure erosion of the declining German Army.

◁▽ The Western Front in August 1918. In three weeks French and Americans had driven German troops from the Marne to the Aisne. The Amiens bulge, created four months earlier, was Ludendorff's last major gain.

seemed to have grown in stature. On 14 July at Rheims General Erich Ludendorff's last desperate effort to break through to Paris had been foiled and the grand French counter-attack against the west flank of the Marne salient was imminent.

In the air, too, the advantage was now with the Allies. The infant RAF, founded on 1 April, had made such enormous progress that it now consisted of 291,175 officers and men and 22,000 aircraft, 3,300 of which were operational. It had become the greatest air force in the world. The new Mark V Tanks were coming off the assembly lines in spate. During the lull on the British front in May and June enormous reserves of ammunition had been piled up. The 300,000 casualties of the spring battles had been replaced by younger and better trained reinforcements from England.

Haig therefore decided that the time was ripe for a counter-stroke on his front and on 12 July secured Generalissimo Ferdinand Foch's approval for a counter-offensive east and SE of Amiens to free the city and the vital Paris-Amiens railway from German gunfire.

Four days later he invited General Sir Henry Rawlinson, commander of his Fourth Army on the Amiens front, to lunch in order to discuss the plan.

Foch welcomed the plan with enthusiasm, and without

restrictions placed General Eugene Debeney's First Army on Rawlinson's immediate right under Haig's command for the operation, which fitted in well with his own overall strategic plan. The Americans were now arriving in France at the rate of 250,000 men a month and Ludendorff's summer offensive on the Marne had stalled. Foch's doctrine of *offensive à l'outrance*, which he had advocated unceasingly even since 1914, would at long last provide the right solution with the added advantage that it would be applied by the British and Americans rather than his own countrymen. Accordingly at an Allied Conference at Bombon on 24 July Foch revived Marshal Joseph Joffre's 1915 concept of cutting off the huge German salient with the British attacking in the north and the Americans in the south.

There has never been claimed more than a high level of mediocrity for Haig's army commanders—with one exception—the 54-year-old Rawlinson, known as 'Rawley the Fox'. Haig had always been suspicious of him as a close friend of General Sir Henry Wilson the CIGS, whom he detested. Rawlinson, like the other army commanders, had made mistakes, notably at Neuve Chapelle and on the first day of the Somme, but he had been quick to learn from experience, particularly the fighting since the spring. He would be the man—more than any other—responsible for the planning and execution of the coming battle which would set the pattern for the rest of the war and incidentally profoundly influence European and American strategic and tactical thought for the next twenty years.

Rawlinson had had the Australian Corps under his command since the end of March. Now that he was to be given the Canadian Corps as well he had every reason for confidence in victory. The Canadians under Lieutenant-General Sir Arthur Currie had been in France ever since early 1915; they had their own sector of the line farther north about Vimy Ridge, captured by them in 1917 and on which their monument now stands. About half of the men in the four divisions were Canadian born; among the rest the



Scottish element was strong. They were better fed, clothed and paid than the home-based British troops and their junior leaders, commissioned and non-commissioned, selected on the strength of actual performance in the field rather than for academic or social reasons, were of high quality. In their ranks were many men of great physical strength, accustomed to a hard life under primitive conditions and to the use of their own initiative. All were volunteers.

When the infantry of the British divisions were reduced from 12 to nine battalions in February 1918, they had remained untouched. In their depots were 10,000 reinforcements. Furthermore they had not been involved in the nightmare bombardments and retreats of March and April and their morale was high. They outclassed all other Allied troops with one exception—the five Australian divisions.

All who came into contact with Australian troops of World War I unanimously agreed that they were the most formidable infantry on either side. Sir Frank Fox, himself an Australian severely wounded on the Somme, writing at the time explained their high morale and tactical brilliance: 'Australia produces a high rate of mental as well as of physical energy. The Anzac, faced by natural elements which are inexorably stern to folly, to weakness, to indecision but which are generously responsive to capable and dominating energy, had become more resourceful, more cruel, more impatient than his British cousin. Australian life leads to a certain hardness of outlook. Life is prized, of course, but its loss—either of one's own or of the other fellow's—is not regarded with any superstitious horror'.

#### Those 'superb' Anzacs

Ever since early April these superb troops had dominated their sector astride the Somme, striking terror into the hearts of the Germans opposite with fighting patrols penetrating deep behind the lines. Haig had long wanted to give them an Australian Corps Commander. When the chance came in May to promote General Sir William Birdwood, Haig, with the agreement of Prime Minister Hughes, seized the opportunity to appoint an Australian of his own choice—Lieutenant-General Sir John Monash, whose handling of his division at Messines Ridge and in the Passchendaele operations had greatly impressed him.

Before the war Monash had been a civil engineer of distinction and a long-service volunteer gunner. He was widely read. On assuming command of the Corps he realized that he must appeal to their intelligence, adaptability, initiative and aggressive instincts. He would feed them on victory, make every man feel that what he personally did was vital and that above all he would get a square deal. A superb organizer himself, he was fortunate too in his Chief of Staff, Brigadier-General Thomas A. Blamey, the future C-in-C SW Pacific in World War II. He was able to insist on meticulous planning and at the same time free himself to supervise the execution of his orders. Before every operation he held conferences with his senior subordinates which he dominated with great clarity and skill. His relations with Rawlinson were close. On 4 July at Hamel near Villers Brettonneux these two had staged a minor battle which was to have wide repercussions.

Now that the Mark V tanks, thanks partly to the drive of Winston Churchill, then Minister of Munitions, were arriving in considerable numbers it was necessary to convince the infantry and particularly the Australians, who had had a bad experience with them at Bullecourt in April 1917,



◀ 'Mr Monash', nickname of the Australian Corps commander, descended from German-Jewish immigrants, who commanded a brigade at Gallipoli and a division in France until promotion on 30 May 1918.

▷ A Canadian stretcher-party, wearing gas-masks, carry one of their wounded through the shattered village of Domart

▽ Open country at last! Half a battery of Australian 4.5in (115mm) light field howitzers are at full 45 elevation to obtain their short four-mile range on the second day. The advance outstripped artillery support

▽▷ Three Australian sections of 1st Infantry Division file past a Whippet's work—a dead German MG team

Musée de la Guerre



Imperial War Museum

of their value. Before the battle Monash arranged exercises to ensure each understood the powers and limitations of the other and learnt to co-operate. Every possible step was taken to ensure surprise.

In the actual attack, with no preliminary bombardment, some 10 battalions, including four companies of the US 33rd Division, and 60 tanks attacked on a 6,000-yard frontage to a depth of 2,500 yards. Low flying aircraft drowned the noise of the tanks moving up to their start-line. At 0302 the tanks joined up with the leading infantry. Eight minutes later 600 guns opened fire. The infantry and tanks together surged forward crushing the enemy machine-gun nests and flushing the Germans out of the village of Hamel. Supply tanks brought forward pickets and wire for consolidation. The RAF dropped 100,000 rounds of ammunition. All was over by 0500.

Casualties were only 775 Australians and 133 Americans. Of the 60 tanks taking part 58 reached their objective. There were 1,500 prisoners. Colonel John F. C. Fuller, the virtual Chief of Staff of the Tank Corps, though that it was this little battle of Hamel rather than the battle of Cambrai in





Imperial War Museum



Musée de la Guerre

November 1917 which made the reputation of the Tank Corps. In fact a war-winning team and a technique had been found—a brilliant Corps Commander, the Australian Infantry, the Tank Corps, the Royal Artillery and, not least, the RAF

The river Somme runs almost due north as far as Peronne some 20 miles east of the line the Australians had held since April. It then makes an abrupt right-angled turn westwards towards Amiens and the sea. North of the river a series of spurs, especially the one above Chipilly, and ravines made poor tank country. South of the river, however, extended a belt of open and slightly undulating country virtually free of obstacles for seven miles from Villers Brettoneux as far as the Luce, providing a veritable race-course for tanks

About ten miles farther to the east, running north to south, stretched the old Somme battlefield, a jungle of partially collapsed trench systems, shell craters and rusty barbed-wire hidden by brambles and long, dried grass and weeds. Within this belt the Lihons Ridge dominated the country in all directions and especially the railway junction of Chaulnes where four vital German supply lines met. Two great Routes

Nationales from Amiens, paved with granite blocks and straight as an arrow, straddled the battlefield; one running to Brie and other to Roye. Both were lined with poplars. Thus up to the old Amiens Outer Defense Line lay perfect tank country; thereafter the old Somme battleground presented both tanks and infantry with difficult problems and provided ideal defense positions for the enemy's machine-guns.

Rawlinson planned a grand attack with the Australians and Canadians making the main effort. They were to be supported by nine heavy battalions of Mark Vs and Mark V Stars and two battalions of light Whippets of the Tank Corps, a total of 589 machines. The 28-32 ton heavy tanks had a crew of eight, an average speed of 3mph and six Hotchkiss machine-guns. They included 'Male' tanks with a pair of 6-pounder guns instead of two of the machine-guns. There were 96 supply tanks, each capable of bringing forward up to 10 tons of ammunition, petrol and engineers stores. The Whippets had a crew of three, weighed only 14 tons and were armed with four Hotchkiss or Lewis machine-guns; their speed was about 8mph. The 17th Armoured





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△ New Zealanders march past a 'Whippet' or 'Tritton Chaser' light tank of 3rd battalion, the Tank Corps, on 26 March 1918 when this October 1917 design first saw action. At Amiens, 96 Whippets were in 3rd and 6th Battalions.

△ Haig, dour as ever, stands with his Chief of Staff and his four Army Commanders. On the left is Rawlinson, whose 4th Army fought at Amiens.

▷ A Lance Corporal of the Tank Corps (right arm emblem) 1st Battalion (red lapel loops), in pre-1908 leather equipment with a Webley .45in Mk VI 1915 revolver.

Car Battalion with 12 armored cars was also available. Some 2,000 field and heavy guns would blast the attack in and onwards with a creeping barrage. Finally there was the Cavalry Corps of three divisions with some 10,000 horsemen.

On the first day Rawlinson aimed to secure the Outer Amiens Defence Line some six miles ahead and to exploit as far as the edge of the old Somme battlefields west of Chaumes. As a result of past experience in working with the French he had hoped that it would be a purely British operation, but when Foch, by placing Debeney's army at Haig's disposal, secured an excuse for intervening if the battle went well, he had to bow to the alleged interests of Allied solidarity. In the event, Debeney informed Haig that

he proposed at the outset to commit only one of his four Corps, supported by 1,600 guns.

The railway from Amiens to Chaumes provided a clearly defined dividing line between the Canadian Corps attacking on the right on a three-division front and the Australians on the left with two divisions forward and their other three disposed behind them in depth. Each Corps had a tank brigade of four heavy tank battalions. Rawlinson proposed that when the Inner Amiens Defence Line had been taken the Cavalry Corps with the two Whippet tank battalions under command should pass through, capture the Outer Amiens Defence Line and hold it till the infantry and tanks arrived. Thereafter they were to advance SE towards Roye and Chaumes, cut the enemy's communications and thus





ease the advance of the French. Both Corps would form up in depth on the principle that those with farthest to go formed up nearest the start-line

One third of the guns were to provide the creeping barrage covering the advance of the infantry and tanks; the rest, including all 684 heavies, were to concentrate on known enemy battery positions. North of the Somme 3rd Corps with one heavy tank battalion under command was given the task of protecting the Australian left by advancing in the general direction of Etinehem

Secrecy and surprise were the very essence of the plan. Major-General John M. Salmond, the RAF C-in-C, proposed to drown the noise of the tanks moving forward during the hours of darkness by low-flying aircraft and at

first light to deliver a concentrated attack with both bombers and fighters on all German airfields within range. Thereafter the bombers would engage enemy reserves detraining at Peronne and Chaulnes; the fighters were given roving commissions to take on any targets that took their fancy.

To conceal the departure of the Canadians, Rawlinson arranged for a great increase in wireless traffic around Ypres. Two Canadian battalions, two Casualty Clearing Stations and a Canadian Wireless section were moved to the neighborhood of Kemmel Hill. A few tanks were also given the task of showing themselves in the north and raising clouds of dust. No Canadian troops were allowed to enter the battle zone until the day preceding the attack. In fact they did not take over their start-line till two hours before Zero.

At the end of March, when the Germans had reached the eastern outskirts of Villers Brettoneux some five miles east of Amiens, the civil population of the city and the neighboring villages had been evacuated. It was thus easy for the *gendarmes* to control the area. All movements farther back were explained as preparations for taking over from the French First Army. Within Amiens itself, straw was laid on the granite surface of the streets to drown the noise of the mass of artillery with iron shod tyres moving through. Elsewhere the wheels of all transport were wrapped with ropes to deaden the sound.

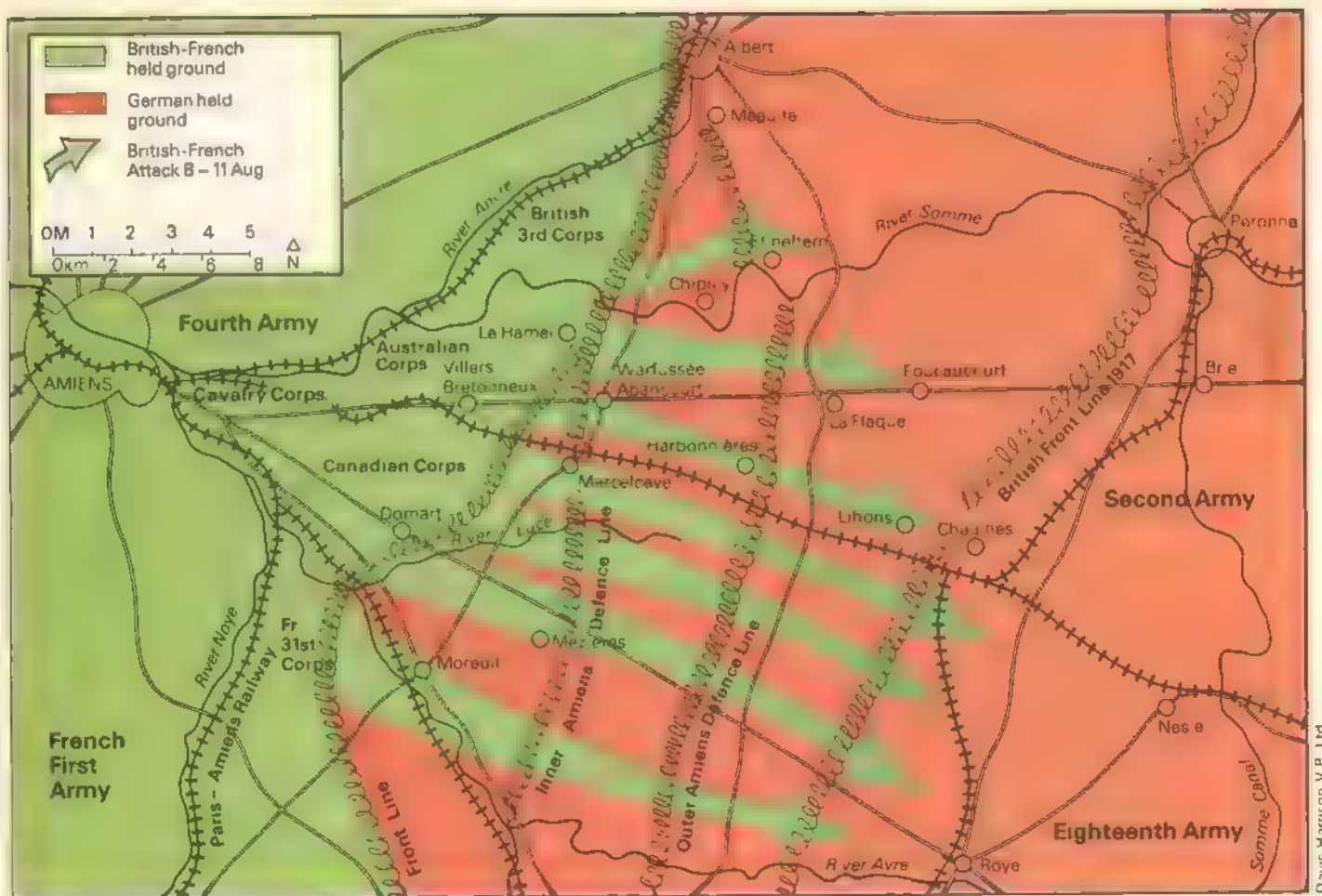
#### Elaborate plan effectively concealed

All movement was under cover of darkness; forward reconnaissances were prohibited. The troops taking part were kept in ignorance of the aim of the attack until 36 hours before Zero hour. By good fortune, strict security, brilliant staff work and good traffic control, the great mass of artillery supporting the attack moved in unspotted by the enemy and registered silently on their targets, as the Germans had done in their great spring offensive. An elaborate camouflage plan under Army control effectively concealed all preparations such as forward ammunition dumps.

Fortunately, south of the Somme the Germans remained in ignorance of the coming attack. Between 29 July and the early hours of 8 August 14 infantry divisions, three cavalry divisions, three brigades of tanks and more than 2,000 guns were concentrated east of Amiens on a front of some 10 miles and within striking distance of the enemy. Opposed to them the German Second Army under General von der Marwitz, with ten divisions in line and four in reserve, held the front from Meaulte to Moreuil; thence southwards the Eighteenth Army under General Oskar von Hutier extended the line roughly to the right flank of the First French Army. Fighting strength averaged only about 3,000 in each division and morale, partly on account of heavy losses in the spring and partly as a result of the bad news from the Marne front, was reported to be in decline.

The night of 7-8 August was moonless and fine. All was quiet as the Canadians moved up to their assault positions on the right of the Australians. At 0300 ground-mist began to form in the river valleys and to spread over the plateau. Monash vividly recalled the tension in the last minutes before Zero at 0420. 'Carrying parties shoulder their burdens and adjust their straps; Pioneers grasp their picks and shovels; Engineers take up their stores of explosives and primers and fuses; machine and Lewis gunners whisper for the last time to the carriers of their magazines and belt boxes to be sure





and follow up. The Stokes mortar carrier slings his heavy load and his loading numbers fumble to see that their haversacks of cartridges are handy. Overhead drone the aeroplanes and from the rear, in swelling chorus, the buzzing and clamour of the Tanks every minute grows louder and louder. Scores of telegraph operators sit by their instruments with their message forms and registers ready to hand, bracing themselves for the rush of signal traffic which will set in a few minutes later; dozens of staff officers spread their maps in readiness to record with coloured pencils the stream of expected information. In hundreds of pits the guns are already run up, loaded and laid on the opening lines of fire; the sergeant in charge is checking the range for the last time; the layer stands silently with the lanyard in his hand. The section officer, watch on wrist, counts the last seconds: "A minute to go", "Thirty seconds", "Fire!"

'And suddenly, with a mighty roar, more than 1,000 guns begin the symphony. A great illumination lights up the eastern horizon and instantly the whole complex organization, extending from back areas almost beyond earshot of the guns, begins to move forward; every man, every unit, every vehicle and every tank on their appointed tasks sweeping onward relentlessly and irresistibly. Viewed from a high vantage point and in the glimmer of the breaking day, a great artillery barrage surely surpasses in dynamic splendour any other manifestation of collective human effort. The artillery barrage dominates the battle and the landscape. The field is speedily covered with a cloud of dust and smoke and spume, making impossible at the time any detailed observation of the battle as a whole. The story can only be indifferently pieced together, long after, by an

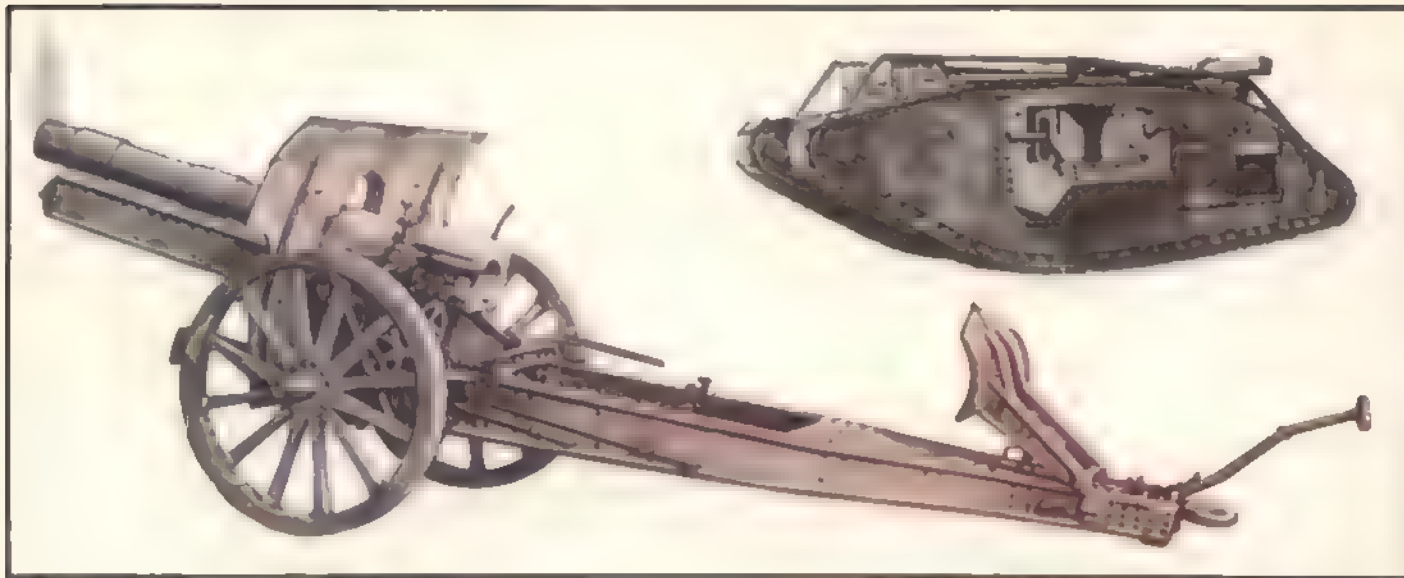
attempted compilation of the reports of a hundred different participants.'

As the tanks moved slowly forward towards the infantry the fog was so dense that visibility was reduced to almost nil. Punctually at 1420 moving in groups of three they crossed the start-line followed by the infantry in small columns in depth. They groped their way forward at a rate of a hundred yards every three minutes, maintaining direction as best they could with the aid of the noise and flashes of the moving barrage 200 yards ahead. South of the Somme surprise was complete. No Man's Land, 500 yards wide, was rapidly crossed.

Typical of the many small battles fought in the confusion and fog of the next few hours was the exploit of Private J. B. Croak of the 13th (Royal Highlanders) Battalion Canadian Infantry, Quebec Regiment. Becoming separated from his platoon he suddenly came upon a German machine-gun post; this he bombed and then jumped into, forcing the crew to surrender. Despite a wound in his right arm he then managed to rejoin his platoon which was held up by a strong point bristling with men and machine-guns. Croak dashed ahead followed by the rest of his platoon and bayoneted or captured the whole of the garrison. A little later he was severely wounded and died in a few minutes.

Corporal H. J. Good, another VC of the same battalion, rushed forward alone and killed or forced to surrender the garrison of another machine-gun post which was holding up the rest of his company. Later, still alone, he came upon a rapid-firing battery of 5.9in howitzers. He and three other men promptly charged the battery and captured the crews of three pieces.





Peter Sanson/Tony Bryan

◁ The four-day offensive, after the 8 August penetration of 6-8 miles, flattened out the German salient by 12 miles.  
 ▴ A German 150mm (5.9in) heavy howitzer. Rated by many the best artillery piece of the war and originally a Corps support weapon, the fourth, 1917, version could fling a 93lb shell 10,000 yards. These, one at 15 yards, destroying itself, accounted for many of the 109 British tanks lost on 8 August, like the 'Male' Mk V (above, right). There were 256 Mk Vs equipping seven heavy tank battalions. This 29-ton 'Male' carries wooden unditching beam and two 6-pdr guns in naval-style sponsons behind 6-14mm armor

On the Australian front, Lieutenant A. E. Gaby's company of the 28th Battalion found itself held up almost at the outset by the wire of an enemy strongpoint. Gaby found a gap and running along the parapet of the trench emptied his revolver into the Germans, drove them from their four guns and single-handed compelled all 50 to surrender. He then quickly reorganized his men and led them forward. Nothing could stop stout-hearted men like these. When the mist cleared about 1100 the Australian flag was flying from the church tower of Harbonnières on their final objective. They had advanced six miles in five hours and reaped a rich harvest of prisoners, food, canteen stores and the entire contents of a German office.

But the tank crews suffered severely from exhaust gas, hot oil, broken limbs and bruises. On the Canadian front on the extreme right only eight tanks reached the final objective. Of the 4th Battalion's 42 eleven survived. The 14th Battalion had better luck, losing five tanks. Only 11 of the 1st Battalion were undamaged. Those working with the Australians had more success. The tanks crushed the wire; the enemy who showed fight were either overrun by the tanks or shot up by the infantry. It was here that one tank of 2nd Battalion, seeing the infantry being enfiladed from the village of Marcelcave, assaulted it single-handed, knocked out six machine-guns and a complete battery. As a result by 1030 all the Australians, except on the north flank where they were temporarily delayed by fire from the Chipilly spur, were on their final objective.

Unfortunately north of the Somme 3rd Corps attack came as no surprise to the 27th Wurtemberg Division. They had ample artillery support and caught the attacking infantry

while forming up in a barrage of gas shells compelling them to move forward in their gas masks. Although some reached their first objectives all their efforts to capture the Chipilly spur proved abortive for the rest of the day.

On the right flank the French assaulted with six divisions. After a heavy preliminary bombardment and starting 45 minutes after the British, they profited from the success of the Canadians, capturing Moreuil by 0930. They then settled down to bombard the Germans on their front for a further three hours 40 minutes.

By 1100 the mist had lifted and the whole plateau was bathed in bright sunlight. There was now more noise of movement than of firing. As far as the eye could see parties of infantry, field artillery, cavalry and tanks were moving forward. Prisoners in formed bodies, lightly escorted and often carrying wounded, were moving back. Farther to the rear the heavy batteries almost wheel to wheel, their muzzles raised to maximum elevation, could no longer fire because the infantry had passed beyond their range. There was no answering German gunfire. South of Peronne, some eight RAF fighters were shooting up men and transport in retreat. On the Canadian front the German 225th and 117th Divisions had been completely annihilated. The 13th Division opposite the Australians, despite support from the Chipilly spur, lost all its infantry except about 100 and all its guns.

Now, if ever, was the moment for the Cavalry Corps to exploit the victory. They were, in fact, well forward and approaching the Outer Amiens Defence Line. Here, as ordered, they halted to await the arrival of the infantry. Unfortunately co-operation with the two Whippet battalions had not worked well. When there was no enemy opposition the cavalry had outstripped the tanks; when enemy machine-guns were encountered the tanks got forward and the horsemen were paralyzed.

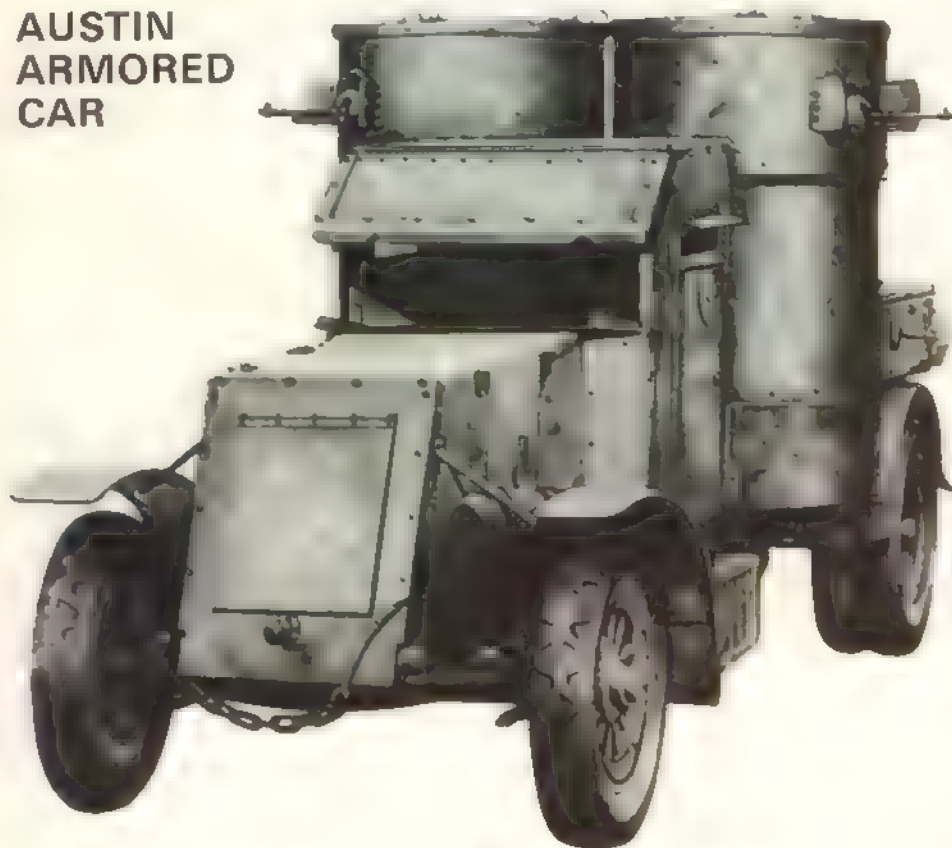
The 12 armored cars of the 17th Armoured Car Battalion, however, burst out on their own down the main road to Foucaucourt. They surprised a German Corps HQ and threw it into confusion. They then drove on to the east, fired on large dumps at La Flaque, wiped out a long column of horsed transport and reduced at short range a packed troop train to a complete wreck. They then roamed the country for hours taking on all comers until their petrol and ammunition ran out. Although half the armored cars were put out





RAF Tank Museum

## AUSTIN ARMORED CAR



*Up the highroad go armored cars of 17th Battalion on 8 August, their first action. Nine out of 12 cars were hit but they caught the German 51 Corps HQ staff at lunch, killed four officers and put the general to flight. East of Harbonnières one of the three sections met 'a number of steam wagons, fired into their boilers causing an impassable block'*

- Weight 4.5 tons
- Length 16 ft
- Width 6ft 7in
- Height 7ft 10in
- Engine 50bhp 4-cylinder
- Speed 35mph
- Range 150 miles
- Crew 4
- Armament 2 Hotchkiss MGs
- Armor 6-8mm
- In service 1917-25
- Several hundred Austins were made, many for Russia
- A rare appearance among the troops—Haig congratulates Canadian infantry, just out of the line

Prof. Sarah Tully Bryan

of action there were no casualties among their crews sufficiently serious to justify evacuation. They even got prisoners to tow their broken down vehicles home

The adventures of 'Musical Box', a Whippet tank of 6th Battalion, were equally dramatic. Near Warfusée Abancourt it attacked a German battery from the rear and put it out of action. Near Harbonnières it wiped out a large party of Germans caught packing up their kits. It then engaged column after column of retreating troops until about 1500 when, with petrol streaming down its sides from pierced

cans on the roof, it was put out of action by a German gun. Lieutenant Allen managed to save two men from the flames, but his driver was killed

There was breakdown in co-operation with the French. At 1130 when Haig asked Debeney to move his mounted troops up on the right of the British Cavalry he received a reply that they would not be available until next day. A personal visit in the afternoon was equally abortive. French operations on this day, partly owing to the fact that they had few tanks and had to rely on their guns to blast their infantry





Imperial War Museum

forward, gave the impression of slow motion. They did not link up with the Canadians who had been at Mezieres at 1030 until 1500 and did not reach the final objective until last light. They did, however, claim the capture of 5,000 prisoners and 161 guns.

Despite these minor shortcomings the British Fourth and French First Armies had inflicted on the Germans the greatest defeat they had suffered since the battle of the Marne in 1914. The five front-line divisions between the Avre and Somme had been completely annihilated. Their official monograph, 'Die Katastrophe des 8 August 1918', admitted the loss of some 700 officers and 27,000 men, mostly prisoners of war, besides some 400 guns and great quantities of material. Alarming many of their men had lost the will to fight. The Australians sent back 7,920 prisoners, half the Allied haul—at the cost of only 3,000 casualties. Reinforcements coming up to the front were taunted with shouts of 'Blacklegs!' and 'You're prolonging the war!'

On the second day only 145 British tanks were available out of the 415 which had opened the battle. Nonetheless the steady Australian and Canadian advance continued with the capture of a further 12,000 prisoners and 130 guns. The Chipilly spur fell to 3rd Corps reinforced at their own request by the US 131st Regiment. According to the Fourth Army history 'the Americans were so impetuous that they outstripped the British on their left and it was due to them that the objective was so rapidly gained . . .'

The 10th was another sultry day. Fourth Army with increasing casualties continued to press on to the edge of the Lihons ridge. It was at this stage when the attack was clearly running out of steam that Foch chose to put pressure on Haig to advance a further eight miles towards the Somme. What exactly passed between Haig and Rawlinson is not known. Rawlinson does appear to have gone to the verge of insubordination and to have demanded 'Are you commanding the British Army or is Maréchal Foch?'

Next morning Haig toured his whole front: Rawlinson's HQ at Villers Brettoneux was his last port of call. That afternoon Rawlinson addressed a conference of Corps Commanders. The battle was over. His army and the 31st French Corps had advanced 12 miles in four days and taken 30,000

*Extracts from 'The Australian Victories' by Sir John Monash, published by permission of the Hutchinson Publishing Group Ltd.*

prisoners and some 500 guns. The total German loss was about 75,000 men, Allied casualties totalling 22,000.

Fuller, Sir Basil Liddell Hart and others would later claim that it was the tanks virtually alone who 'crushed the fighting spirit out of the enemy and paralyzed his will to endure'. Brigadier-General Sir James E. Edmonds, the British Official Historian, would continue to give the main credit to the infantry supported by the artillery and the RAF. It is certainly true that there had been a great step forward in counter-battery technique in co-operation with the RAF. Without the support of the creeping barrage it is doubtful whether the primitive Mark Vs would have survived for long. Some years later Rawlinson, after commenting on the fact that surprise was complete, wrote 'While everyone did splendidly, I think the spirit of the Colonial Infantry was probably the decisive fact'.

Ludendorff's great offensive had always been a race against time before the arrival of the Americans inevitably tipped the scales. Now Ludendorff's manpower resources were running out. Overworked, frustrated and irritable, he suddenly lost his nerve. When the Kaiser came to his headquarters at Avesnes on 11 August, Ludendorff offered his resignation. In refusing to accept it the Kaiser bowed to the inevitable, 'I see we must strike a balance. We have nearly reached the limit of our powers of resistance. The war must be ended.' After the war Ludendorff gave the battle its epithet, 'August 8th was the black day of the German Army in the history of the war. This was the worst experience I had to go through . . .'

Equally significant was the effect of the victory on Haig himself. In the spring faith in the British Higher Command had sunk to its lowest ebb. Now suddenly this dour, inarticulate man seemed to have increased in stature. A new spirit of confidence in him and his staff suddenly seized the whole of his Army. Under his leadership they would bring the war to an end in 1918

Hubert Essame



# NORTH AMERICAN B25 MITCHELL

**Originally a standard attack bomber, the B25 Mitchell became the most heavily armed 'gunship' of World War II**

They had always known it would be a hazardous mission, and every man was a volunteer. But on that April morning in 1942 in the briefing room of the United States aircraft carrier *Hornet*, pitching in the long Pacific rollers 823 miles from Japan, the Army Air Force bomber crews were stunned as they listened to their commanding officer, Lieutenant Colonel James H. Doolittle. Take-off was to be immediate, and they were being handed a one-way ride. There would be no return tickets for the sixteen B25s lashed to the flight deck of the carrier.

The chances of any of the bombers reaching China from so far out in the Pacific were slim. Doolittle knew this, and so did his crews—but they went ahead. At 0818 on 18 April, 1942, Doolittle's own B25 roared off the *Hornet*, followed by the other fifteen bombers. The famous 'Doolittle Raid' on Tokyo had begun. That day over Japan, 80 courageous

American airmen flew the *North American* B25 Mitchell into a unique place among the great combat planes of World War II

The origins of the B25 can be traced back to the NA40, an all-metal, twin-engined attack bomber with a high wing and tricycle undercarriage. It was an unsuccessful contender for a 1938 Army Air Corps requirement. This machine made its first flight in January 1939 but was unfortunately destroyed shortly afterwards at Wright Field, Ohio, when being test flown by Major Younger Pitts, a service pilot assigned to the attack bomber test programme. The plane became unmanageable when turning to make a landing approach. This was due to a malfunction of the newly-designed propeller pitch control. In the ensuing crash, the plane was completely burnt out. Luckily, the crew escaped without injury. The Air Corps accepted that the accident



*The standard North American B25J Mitchell medium and ground-attack bomber. The heavy battery of 5in MGs and the dorsal turret were retained, with the standard bomber nose fitted. About 4,300 of this mark were built between 1943 and 1945*



was no reflection on the basic concept of the NA40 and since the aircraft showed promise it was suggested that development be continued

After the outbreak of war in Europe in September 1939, military preparations in the United States speeded up dramatically. In March 1939 a circular had been sent out calling for a five place medium bombardment aircraft, and *North American* submitted plans of the NA62. This was a re-work of the NA40 with the pilot and co-pilot seated side by side. This replaced the tandem design. The NA62 also had a mid-wing configuration, and 1,700hp Wright Cyclone engines. The other principal contender was the Martin 179, later the famous B26 Marauder, which in fact won the competition for this contract. But the *North American* design was also accepted, on 10 September, and a 'paper contract' was issued on the 20th for 184 B25s—as NA62 was from then on to be known. The planes were to be placed in immediate production without the usual preliminary series of experimental and test aircraft

On 19 August 1940 the first B25 took off on its maiden flight. This sleek new bomber measured 51ft 5in in length, had a wing span of 67ft 6in, and accommodated a crew of five. Its top speed was claimed to be 322mph. The maximum bomb load was 3,600lb. For defensive armament it relied on three .3in hand-held machine-guns—one in the nose and two in midships positions—and a single .5 Browning in the tail

At first, the B25 proved to be a remarkably stable aircraft with exceptionally good 'hands off' flying characteristics. The first bombing runs to be attempted, however, disclosed an unacceptable degree of directional instability. When the pilot made small corrections with the rudders to follow the bombardier, one of the wings would suddenly lift. If a bomb was being released at that moment it would be tossed sideways off the target. Excessive wing dihedral was thought to be the cause. To cure the problem the wing

panels outboard of the engine nacelles were re-rigged in a horizontal position

The first nine B25s retained the original fully dihedral wings, and these aircraft and the next 15 to follow them off the production line were known simply as the B25. The 25th machine was designated B25A and incorporated armor protection for the pilots and self-sealing fuel tanks—innovations that combat experience in Europe had shown to be essential. Forty B25As were built, and by mid-1941 the 17th Bombardment Group (Medium) was beginning to re-equip with the new *North American* bomber at McChord Field, near Tacoma, Washington State. It was about this time that the type became known as the Mitchell, after Brigadier General William 'Billy' Mitchell, the pioneer advocate of American military air power.

After the Japanese attack on Pearl Harbor on December 7 1941, the 17th Bombardment Group—made up of the 34th, 37th and 95th Squadrons—was assigned to anti-submarine patrols over the Pacific. On 24 December one of their B25s became the first American twin-engined bomber to destroy a Japanese submarine

The coming into service of the B25 was not entirely without incident. During maneuvers in Carolina in 1941, a B25A blew up shortly after take-off. Several similar losses followed. An investigation disclosed that self-sealing compound in the fuel hoses was rupturing inside the hose and partially cutting off the fuel supply. Enough gasoline reached the engines for the routine pre-flight run-up, but under continuous full throttle take-off conditions, failure would occur. All B25s had to be grounded until improved tanks and hose had been fitted

A new variant of the Mitchell, the B25B started leaving production lines during 1941. This machine was fitted with a more comprehensive armament of machine-guns than the earlier models. In place of the B25A's beam guns there were two Bendix turrets housing twin calibre .5, the ventral turret



The flight-deck of the aircraft-carrier Hornet crowded with B25Bs as they warm up for the take-off en route for Tokyo. This famous raid by Lt. Col. James Doolittle's 17th Bombardment Group was a great boost for the US war effort.



being retractable. Large unprotected areas still remained however, notably in a wide arc forward where the propellers and radio equipment masked the turret guns and to the rear quarters where the tail fins intruded on the field of fire.

The ventral turret proved to be of only limited value. It had a remote control mechanism with the gunner kneeling on the fuselage floor. His chest rested on a supporting pad while he peered through a system of angled sighting mirrors and operated the guns with a dual hand control located beneath his chest pad. As a result of the cramped position and lack of direct vision, most ventral gunners were almost immediately affected by vertigo and many vomited before they could even open fire. The ventral turret also had to be lowered with care, because if it reached the bottom of its travel with an unduly abrupt bump, the delicate micro-switch could be broken and the turret would then be jammed in the down position with inoperable guns.

Despite its failings the B25B saw widespread service throughout the world. Late in 1941 Russian pilots and ground crews arrived in America for instruction on the aircraft. In March 1942 the first batch of 72 Mitchells destined for the Soviet Union were ferried out by Pan American Airline crews via Miami to Habbaniya (Iraq) and Tehran, where Russian pilots collected them. Twenty three machines went to the RAF in England. There, they were known as Mitchell 1s and were used only as training aircraft. The Dutch air force was promised B25s for its South Pacific squadrons.

### Japan's 'divine' invincibility

The early months of 1942 were bleak indeed for the Americans as the Japanese spearheads thrust ruthlessly across the Pacific, spreading ever wider the boundaries of their empire. The American public badly needed a morale booster which would check the rampaging Japanese and demonstrate to Emperor Hirohito's hitherto all-conquering Imperial army and navy that their supposed divine invincibility was a myth.

In Washington, a submarine officer named Captain Francis Low wondered idly if there was any Army plane that could be shipped to within striking distance of Japan on an aircraft carrier. No ship-borne Navy planes had sufficient range for such a job at that time, as Low well knew. The nearest that any task force could reasonably be asked to approach to the heavily defended Japanese islands was about 400 miles. The US Navy C-in-C, Admiral Ernest J. King, referred the idea to his air officer, Captain Donald Duncan. Duncan came up with a plane that he thought could do the job—the B25.

It had the outstanding flying qualities needed to get airborne off the 700ft of an aircraft carrier's flight deck with a 2,000lb payload and enough fuel to fly 2,000 miles.

Duncan placed his proposals before Admiral King, and King lost no time in getting the agreement of General of the Air Force Henry 'Hap' Arnold. The next step was to obtain President Roosevelt's blessing, which was unhesitatingly given. There was now an idea and a plane. Next they needed a man to carry the job through. They sent for Lt. Col. 'Jimmy' Doolittle—aeronautical engineer, stunt pilot, record breaker, and outstanding service officer.

By February 1942 the most experienced B25 outfit in the Air Force was the 17th Bombardment Group, stationed at Columbia Air Base, North Carolina, which it shared with the reconnaissance Mitchells of the 89th Reconnaissance Squadron. Doolittle flew down to Columbia and asked for

volunteers to undertake an 'interesting but dangerous' mission. There was an overwhelming response to his appeal and 24 crews were selected. They proceeded to Eglin Field, near Pensacola, Florida, where work began on the preparation of their B25s.

The top secret Norden bomb sights were removed to obviate any possibility of one of them falling into Japanese hands if a plane was brought down. As the mission was to be flown at only 1,500ft this piece of equipment was superfluous in any case. The heavy liaison radios were dispensed with, and the cordially disliked ventral turrets were unshipped. Extra fuel tanks were fitted in the bomb bay, in the mid-fuselage crawlway, and in the space left by the deleted ventral turret. The observer's position in the tail—from which the .50 Browning had been deleted on the B25 model—was provided with dummy wooden guns to deter Japanese fighters. Finally, a low-level bomb-aiming device of impressive simplicity and cheapness was installed in the bombardier's compartment. It weighed only 21lb but had the accuracy of a rifle sight.

Experts were flown in specially to tune the Bendix carburetors. New propellers were fitted to every plane. With their B25s lightened by 1,200lb and maintained to perfection by the meticulous care of the groundcrews, the pilots found they had no difficulty in lifting off, fully loaded, from a 500ft take-off run.

The carrier *Hornet* was to pick up Doolittle's men from San Francisco, and the B25s were flown to California late in March. On 1 April the powerful flat-top headed westwards through the Golden Gate with 16 Mitchells lashed to the flight deck and Doolittle was at last able to tell his flyers the nature of their mission, although many had already guessed where they were going.

Although a B25 could take off from a carrier it could not land back on again. After hitting targets in Tokio, Yokohama, Osaka, Kobe, and Nagoya the bombers were to head for Chinese bases controlled by the friendly Chiang Kai-shek regime. Take-off was to be 400 miles from the Japanese coast. Calculations indicated that this should leave the pilots with sufficient fuel to reach their Chinese bases.

### Carefully laid plans shattered

Doolittle's carefully laid plans were shattered when a Japanese patrol stumbled on the task force when it was still more than 800 miles from Japan. In frantic haste the big bombers were made ready for immediate take-off. One by one they raced down the *Hornet's* pitching deck into a 27-knot gale.

Precious fuel was burned up fighting unexpected headwinds, but all B25s made it to their targets and pressed home their attacks. Doolittle found himself shadowed by five Japanese fighters as he headed for Tokio at tree top height, but he jinked down a valley between two hills and lost them. Lieutenant Ross Greening was attacked by four Kawasaki Ki61s (Tonys). He succeeded in shooting one down whilst evading the others. Lieutenant Richard O. Joyce's B25 had been attacked by no less than nine Zeros over Tokio, but the superb handling qualities of the Mitchell saved him as the maneuverable little Japanese fighters screamed in from all sides. Despite an 8in hole ripped in the fuselage just in front of the horizontal stabilizer, Joyce managed to get away.

A long struggle to reach the safety of friendly Chinese bases now faced the weary pilots. Unable to find their designated fields in bad weather and gathering darkness,



Imperial War Museum



△ The B25B Mitchell was introduced in 1941. This version had an improved armament with a rear-sited dorsal and a ventral turret. Neither the dorsal turret nor the tail turret are fitted with guns on this aircraft, which is probably being test-flown straight after delivery from the factory.

◁ The rear-gunner's view of a low-level bombing attack. A close-following Mitchell of the US Army 7th Air Force begins to turn away to starboard as its bombs explode on the airstrip of Wotje Island in the Marshalls in 1943. A successful pattern of 'softening-up' raids and naval bombardment as a preliminary to the US assault of Japanese-held islands had been established.

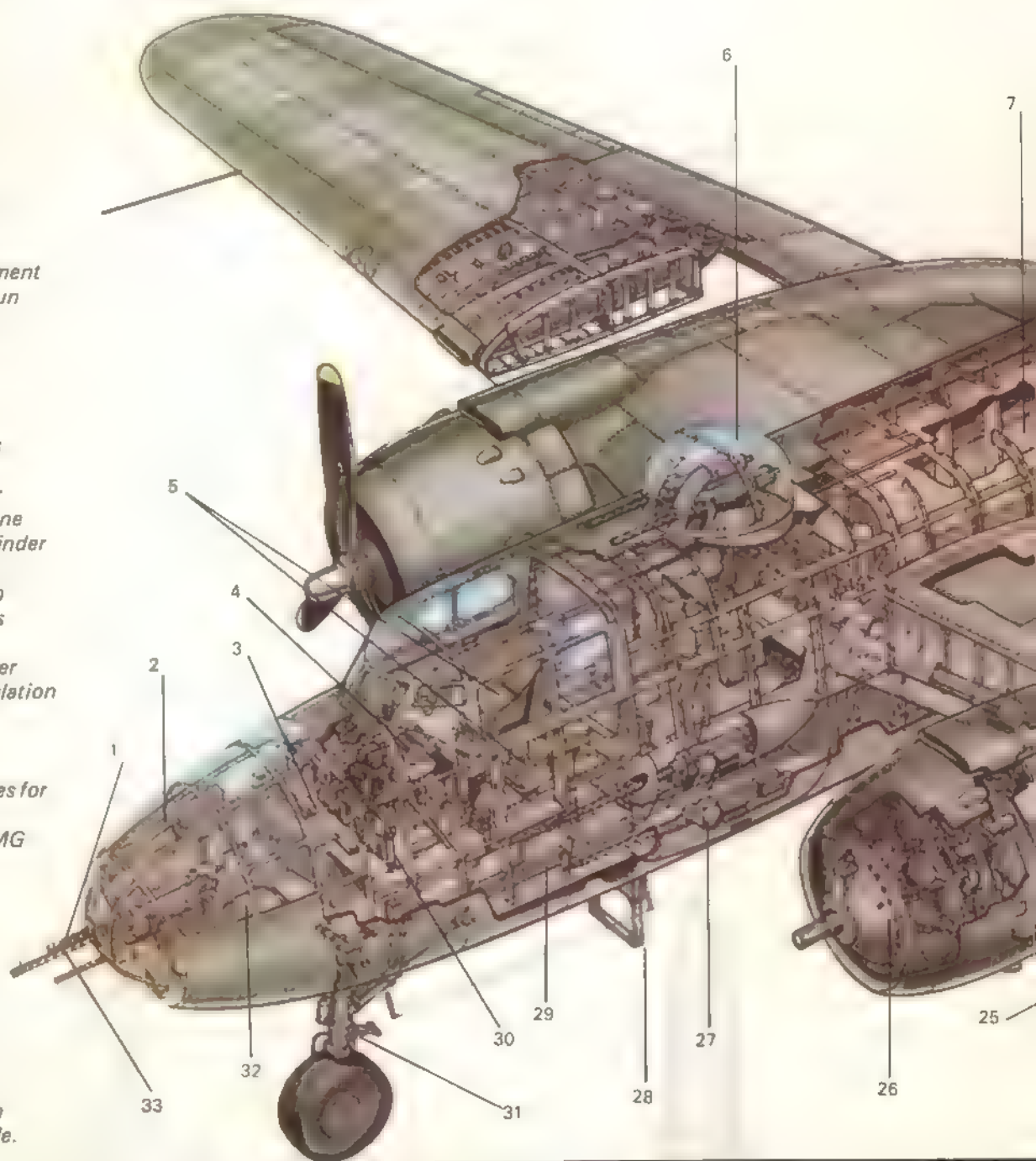


# North American B25J Mitchell

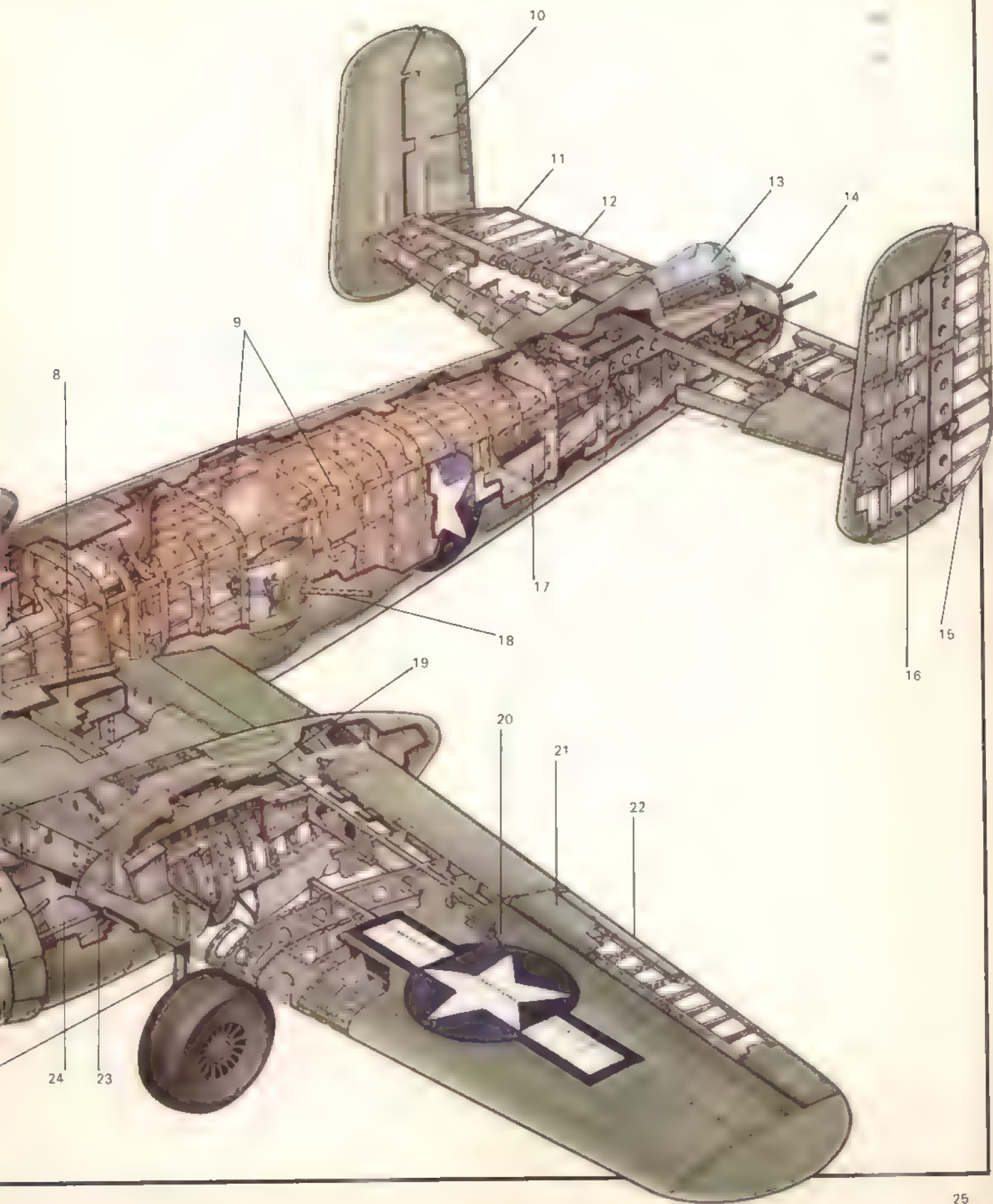
- 1 Fixed twin .5 MGs
- 2 Flexible ammunition belt
- 3 Cockpit heater
- 4 Pilot's controls
- 5 Pilot's and co-pilot's seats
- 6 Twin .5 MGs in dorsal turret
- 7 Bomb bay
- 8 Fuel cells
- 9 Ammunition boxes for waist guns
- 10 Rudder trim
- 11 Elevator
- 12 Elevator trim
- 13 Rear-gunner's compartment
- 14 Twin rear .5 MGs
- 15 Port rudder
- 16 Rudder-operating mechanism
- 17 Walkway to rear-gunner's compartment
- 18 Flexible .5 waist gun
- 19 Fuel cells
- 20 Aileron-operating quadrant
- 21 Aileron
- 22 Aileron trim-tab
- 23 Engine mountings
- 24 Firewall
- 25 Main landing gear
- 26 Port Wright Cyclone R2600-29 14-cylinder air-cooled radial engine of 1,700hp
- 27 Fixed twin .5 MGs in side blisters
- 28 Crew access ladder
- 29 Heating and ventilation ducting
- 30 Rudder pedals
- 31 Nose wheel
- 32 Ammunition boxes for fixed MGs
- 33 Flexible nose .5 MG

**Dimensions and data**  
 Span 67ft 7in  
 Length 52ft 11in  
 Height 15ft 9in  
 Weight (empty) 21,100lb  
 Weight (loaded) 35,000lb  
 Crew Six  
 Max speed 275mph at 15,000ft

**Service ceiling** 25,000ft  
**Range** (with 3,200lb bomb load) 1,200 miles  
**Armament** Multiple US M2 Browning .5 MGs  
 Rate of fire: 800rpm  
 Muzzle velocity: 2,900fps



We are grateful to the Historic Aircraft Museum, Southend, Essex, for information supplied for this article.







Imperial War Museum

◀ Bristling 14.5in MGs and a 75mm cannon inset into the 'nose-pocket', this B25H could still carry a 2,000lb torpedo or 3,200lb of bombs. The dorsal turret was unpopular and unreliable and had gone. Going into service in February 1944, the B25H was successful on anti-shiping operations in the Pacific.

▷ Bombs straddle a Japanese warship and gun-fire peppers the sea as a B25 Mitchell, bomb-doors still open, banks away. Although the bomb-aimer's accuracy was not spot-on, the ship in the background has been hit. This action off the Philippine coast against a Japanese escort vessel was typical of many similar attacks. Circular ripples in front of the ship mark the explosion of misses.

many crews bailed out over China, and some had to make forced landings. Three crews came down in areas under Japanese influence and three of the captured men were later put on trial and executed. Another eventually died in a prisoner-of-war camp from malnutrition and mistreatment.

The plane flown by Captain Edward J. 'Ski' York was found to be using far more fuel than it should. To make matters worse, the dorsal gun turret became unserviceable, leaving the ship almost defenseless. York had two alternatives—land in Japan and surrender, or fly westwards and ditch in the East China Sea. The only other possibility was to head for Russia, but the pilots had been strictly forbidden to do this. Attempts through diplomatic channels to obtain Soviet co-operation and the use of Russian bases had been unsuccessful. The hard-pressed Russians considered they had enough on their hands fighting Nazi Germany without provoking a war with Japan as well. With the lives of his men at stake, however, York chose to disobey orders and landed at Vladivostok, where the B25 was confiscated and the crew were interned.

All of the *Hornet's* B25s were lost. The majority of the flyers, however, were helped back to American bases by the Chinese, including Doolittle himself, who earned a Congressional Medal of Honor. The damage done by the raiders was not very great, and due to genuine bomb aiming errors some bombs fell in densely populated civilian areas. This provided the Japanese with a tailor-made excuse for executing captured flyers. There is no doubt, however, that the morale of Americans everywhere received a tremendous shot in the arm and Doolittle became a national hero.

Meanwhile, in the South Pacific, a number of B25s intended for the Dutch had been appropriated by the American Army and in April 1942 the 3rd Attack Group under Colonel J. H. Davis was assembled on New Guinea with 10 B25s and three B17s. For several days the group flew sorties from a disused Philippine Airlines base in the Philippines against Japanese harbor facilities and aero-

dromes. Eventually, however, they were detected and had to return to New Guinea.

By this stage of the War, B25 production was stepped up dramatically. At Inglewood, California, 1,619 of the next variant, the B25C, were under construction, while 2,290 of the basically similar B25D were coming off the line at a new factory in Kansas City. The C and D models had autopilots as standard equipment (these units had been fitted to Doolittle's B25Bs), increased fuel capacity, external bomb racks below the wings for eight 250lb bombs—giving a maximum offensive load of 5,200lb over short ranges. They also had facilities for carrying a 22.4in torpedo below the fuselage (infrequently used in practise), and heavier nose armament comprising a swivel-mounted .5 calibre in addition to the fixed .3. These models could be readily distinguished from earlier B25s by the individual exhaust stacks fitted to each cylinder that discharged from special fairings round the skirt of the engine cowlings.

Experiments had been carried out to see if it was possible to fit a battery of four .5 machine-guns in the nose of a B25 so that it could be used as a ground attack plane. The results were encouraging, and spectacular successes were scored against a Japanese troop convoy in the Bismarck Sea (2-4 March 1943). A combination of low-level 'skip bombing' techniques and concentrated machine-gun fire virtually destroyed the entire Japanese expedition. Only four destroyers escaped. It was therefore decided to bring out a new model, the B25G, specially designed for the attack role with a 75mm cannon mounted in the nose, flanked by two machine-guns for sightings and to subdue flak.

The US Far East air forces were persuaded to accept 63 B25Gs and when the first of them arrived in July it was given to Lieutenant-Colonel Paul I. 'Pappy' Gunn for assessment. The huge 9ft 6in long cannon weighed 900lb, fired a 3in shell, and fitted into what had formerly been the bombardier's tunnel. It was loaded and fired by the navigator, who had barely enough room to avoid the tremendous 21in



recoil. Such a huge weapon was certainly capable of immense destruction, but it was found that even with a long steady approach to the target only about four of the 21 shells carried could be fired in any one attack. During this time the plane was a sitting duck for flak gunners on either side of the flight path.

'Pappy' Gunn further modified the B25G by fitting two pairs of forward-firing .5s mounted in blisters on each side of the nose. Initially this additional fire power caused severe damage to the wings and fuselage, but extra strengthening was incorporated to absorb the blast and vibration. 'Pappy's' idea of fitting a pair of .3s in each landing light bay was firmly vetoed by the manufacturers, however, because of the risk of damaging the wing spar.

From late 1943 onwards, the B25 was employed against shipping and ground targets in both the Mediterranean area—where the 9th and 12th US air forces were flying Mitchells and in the Pacific with the 5th Air Force. US Marine Corps units equipped with the B25 also started to operate in the Pacific during 1943. The type was known in the Navy as the PBJ, and the B26 Marauder began to disappear from this theater as the Mitchell's unquestioned excellence became firmly established.

The 5th Air Force's B25 groups earned between them two Congressional Medals of Honor and nine Distinguished Unit Citations. The first Medal of Honor was posthumously awarded to Major Ralph Cheli, who on 18 August 1943 led his squadron from the 38th Group against Wewak airfield, New Guinea. As Cheli began his run-up to the target, his B25 was attacked by a Nakajima Ki43 (Oscar) which shot up the starboard engine and set it on fire. With the flames spreading quickly to the wing the B25 still held its course, aiming for a line of parked Zeros on the airfield. Only when he had pressed home his attack did Cheli call his wing man to take over command of the squadron. His time had run out. Before the horrified eyes of his pilots, Cheli's crippled bomber rolled over, crashed into the sea and exploded.

Massive B25 strikes were ordered on 2 November 1943 against targets in New Britain. Major Raymond H. Wilkins led his 3rd Group squadron in a low-level skip bombing attack on Japanese shipping in Simpson Harbour and sank two transports with his own bombs. Not content with this, he returned to the inferno of flak and made repeated runs over the target area to draw enemy AA fire off his squadron's planes until, inevitably, his B25 received a direct hit. A wing crumpled away and the wreckage plunged into the sea. Maj. Williams also received a posthumous Medal of Honor.

A distinguished Unit Citation was awarded to the 345th Group for their part in the 2 November attacks. This outfit became known as the Air Apaches, since the Apache Indian's head that was the group's insignia was painted on the tail fins of its B25Gs. In addition the planes were decorated with a colourful assortment of ferocious designs based on wild horses or the heads of tigers, panthers, bats and hawks. The squadrons themselves were known as the Hawks (the 498th), the Bats Outa Hell (the 499th), the Mustangs (the 500th) and the Black Panthers (the 501st).

Eventually the heavy cannon was removed from most B25Gs, partly because it was of limited value, and partly because suitable targets became fewer as the war moved into 1944. Two additional machine guns were fitted in its place to aircraft in the field. A further cannon-armed variant, however, the B25H, began to arrive in the Pacific in February 1944. In this model the controversial ventral turret was at last deleted—as it had been in some B25Gs when it was found that hydraulic fluid and dust frequently obscured the sighting system. But the defensive armament was increased by the installation of twin fifties in a power-operated tail mounting and a waist hatch on each side of the fuselage fitted with a single .5 calibre machine-gun. The dorsal turret was moved forward to a position immediately aft of the cockpit, two pairs of packaged .5s were fitted either side of the fuselage. There were four fifties in the nose together with a new design of 75mm cannon, which was



much lighter than the gun fitted to the G model. The B25H could still carry a 2,000lb torpedo or 3,200lb of bombs. It was a formidable warplane, but the drawbacks that had become apparent in the earlier cannon-armed Mitchells still remained and by August 1944 the 'flying field-gun' concept had been abandoned.

In Europe, the B25 was enhancing its reputation still further in the hands of the RAF. The first B25C and D Mitchell IIs reached Nos. 98 and 180 Squadrons at Foulsham, Norfolk, in October 1942. But although the RAF's first Mitchell raid took place on 22 January 1943 when oil refineries in Belgium were attacked, recurring difficulties with the dorsal turret led to the confinement of the plane to air-sea rescue work until the late spring of that year. By August, however, the turret problems had been solved and the RAF's Mitchells became an increasingly important part of the Allied medium bomber force in the European theater.

In southern Europe B25s were now being operated exclusively by the US 12th Air Force. The 9th had moved to England and transferred its Mitchell units to the 12th.

The 10th Air Force in India later acquired one of the 12th's B25 groups (the 12th), which joined an existing 10th Air Force B25 outfit, the 341st, on the Burma front. The 341st had earned a Distinguished Unit Citation for evolving a 'flip' bombing technique to destroy bridges. The discovery was made accidentally when Major Bob Erdin came in too low during a raid on a bridge over the river Mu. He had to pull sharply back on the controls to clear a tree just as the bombs were released. As the smoke from the explosions cleared, Erdin saw to his astonishment that he had not only hit the bridge, he had totally destroyed it. The technique was later developed into a fine art by the 341st, who from then on bore the name 'Burma Bridge Busters'.

The final version of the Mitchell was the B25J, of which

4,318 were built between 1943 and 1945. This was basically almost identical to the B25H, but reverted initially to the glazed nose with a bombardier's position that was part of the original B25 design. Room was still found for one moveable and two fixed .5 machine-guns in the forward compartment. The maximum bomb load for short range operations was 4,000lb, but the usual offensive payload was either six 500-pounders or three 1,000lb weapons.

Medium bomber operations in the Pacific theater were invariably carried out at low level and when the B25J began to reach combat units in the spring of 1944 it was found that the bombardier was not needed. Solid noses with eight .5 machine-guns were therefore fitted to many B25Js in the field, and from September 1944 onwards aircraft were being delivered straight from the factory in this configuration.

Although the Japanese were now on the retreat everywhere, the war in the Pacific continued with unabated fury. The famous 38th Group, which already had Maj. Cheli's Congressional Medal of Honor to its credit, earned fresh glory on 16 June 1944. A long range strike was launched from Hollandia in northern New Guinea against the twin Japanese-held airfields of Jefman and Samate on Salawati Island, in the Moluccas. This was the longest mission so far flown by B25s, and necessitated the fitting of bomb-bay fuel tanks. The Air Apaches of the 345th Group also participated in this strike and were scheduled to come in as the second attack wave.

The Japanese had no inkling of an impending raid and the 38th achieved complete surprise. At 1255 they were over the Jefman strip and spread out in line abreast to begin their run-up to the target. Throttles wide open, they came in low, first at tree-top height and then down still more until the propellers were almost clipping the grass. The enemy realized too late what was happening. Frantically they tried to get their fighters airborne as a few AA guns began firing



*A B25JII of 98 Squadron RAF releasing its stick of bombs. With some minor external changes this version was similar to the B25B. The RAF received over 500 of this Mitchell version and put them to good use on D-day and later.*

sporadically around the airfield perimeter, but already the B25s were upon them with machine gun bullets spewing from the heavy calibre guns in the nose batteries. Parachute bombs drifted down in their wake. By the time the Air Apaches arrived there was nothing much left to hit amid the smoking ruins that had once been a Japanese air base

Minutes later the death-dealing B25s blasted Samate, hosing .5 calibre machine-gun fire into the panic stricken defenders. This time the Japanese AA gunners were more effective and the 38th suffered their only loss of the mission—a B25 that had been behind the main attack and was caught by flak. But in retaliation they claimed to have destroyed 11 Japanese fighters in the air

The B25J began to reach the RAF in Europe in the autumn of 1944 where it was known as the Mitchell III. Combat conditions in this theater favoured the retention of the glazed nose and the bombardier's position. The US Marine Corps continued to employ various marks of B25. This variant was frequently equipped with covered radar equipment on the wing tip in Marine Corps service. Racks for carrying four rocket projectiles outboard of each engine nacelle were fitted to many B25Js, including some PBJ-1Js that were used for night attacks and had radar installed in the nose

A rare variant was the F10. Basically, this was a B25D modified for photographic reconnaissance use by removing all armament and installing extra fuel tanks. The cameras were mounted in the rear fuselage and in a chin fairing. This model was used in the Caribbean but only 100 were delivered.

In the later stages of the war many combat-weary B25s of the earlier types were returned to the United States for refurbishing and use as advanced trainers. These were initially given the designation AT24, although they subsequently became known as TB25s

By the end of World War II the B25 had entered service with a number of other Allied air forces in addition to those of America and Britain. The Russians eventually received a total of 870 B25s. These seem to have been mostly used as ground attack aircraft. The Brazilian Air Force used 29 Mitchells for maritime patrol work. The Dutch Air Force received 249 B25s which they flew in both Europe and the south-west Pacific, and the Chinese Nationalist Air Force operated 131 Mitchells supplied under lease-lend arrangements

The B25 story did not end with the cessation of the fighting in August 1945. In the years that followed Mitchells were to fly with many air forces, including those of France, Mexico, Venezuela, Canada, Brazil, Indonesia and even the Chinese People's Republic (aircraft captured from the Chinese Nationalists in 1949).

Unlike its rival, the B26 Marauder, the Mitchell was not fitted with up-rated engines during the course of its wartime career and consequently there was no real improvement in the plane's performance over the years. Indeed, as demands for extra equipment and armament were dictated by combat requirements the maximum weight rose from 25,000lb in 1941 to 35,000lb in 1945. It was remarkable that the top speed should still be as high as 285mph claimed for the B25J. The maximum range of this model with a 3,200lb bomb load being 1,200 miles.

The B25 will be remembered for its outstanding handling qualities that made it easy to fly but at the same time enabled a Mitchell pilot to stand his machine on a wing-tip when making combat turns. Also, the excellent single-engine performance brought many a battle-scarred bomber limping safely back to its base. The North American B25 was unquestionably one of World War II's most successful combat planes

**Rodney Steel**



*Twelfth USAF B25Ds head in flights of three towards Cassino, in 1944. Whether the punishing Allied bombing to destruction of the beautiful monastery was justified is still being debated by military historians*



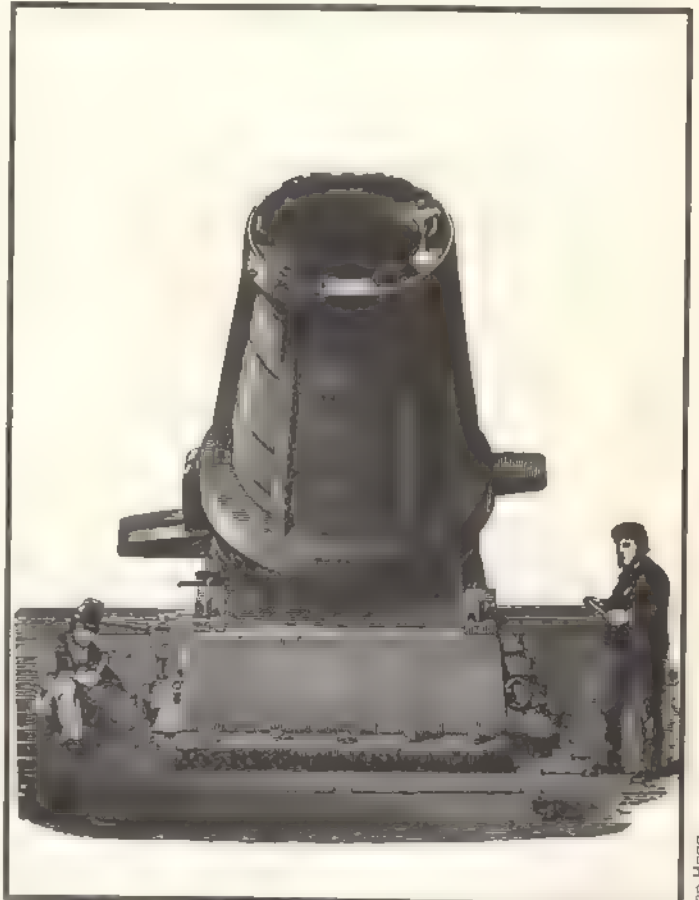
# SIEGE GUNS

**They were huge; they caused terrible destruction. But defences kept pace until the siege gun dug its own grave**

Siege artillery had its beginnings at the Siege of Odrük in 1377, during the Hundred Years War. The Duke of Burgundy produced 140 cannon, some of 16in calibre, and with them so battered the castle that the English commander, William de Weston, surrendered. From then on the siege-train, a cumbersome and slow-moving collection of heavy guns, was usually trailing along at the tail of an army, ready to be brought forward and positioned when an obstacle presented itself. It was a slow business, but relatively safe. The guns were heaved into place and opened a bombardment of the town or castle until parts of the walls were demolished, allowing an assault to pass through.

Usually, after a period of battering, the defenders decided that they had taken sufficient punishment for honor's sake and surrendered gracefully. The significance and value of a well-equipped siege-train is best realized by study of a campaign where it was deficient, such as Wellington's in Spain during 1812. He had no siege train worth speaking of, and as a result the sieges of Ciudad Rodrigo, Badajoz and Burgos were bloody and violent affairs of scaling ladders and hand-to-hand fighting.

During the nineteenth century, fortifications became stronger, because of the need to resist rifled guns and explosive shells. Many trials were conducted on the Continent, firing various types of guns and mortars against different forms of construction in order to develop defensive works which would be impervious to artillery attack. But as fast as engineers produced new designs of defense, the artillerymen produced bigger and more powerful guns, and the whole affair took on the appearance of a race. The advantage, it seemed, lay with the defense; there was little



Ian Hogg



Ian Hogg

Siege-trains since the fourteenth century faced the mounting problem of weight as mortars increased in size due to the need for more and more powerful weapons to overcome stronger and stronger defenses. One solution was the British mortar designed by Mallet in 1855. The longitudinal bars clamped the multi-part barrel and breech together. Loading the shell demanded the use of heavy-duty tackle. The 2,400lb shell was hurled nearly two miles by the mortar, which could be broken down into 12-ton sections.

A detachment of Garrison Artillery bringing a British 13in mortar into action. This 1850 weapon fired a 200lb shell 2,700 yds.

The German 42cm 'Gamma' Howitzer of 1906. This was Krupp's first attempt to create a fortress cracker. Avoiding the Allied Disarmament Commission in the 1920's, 'Gamma' was resurrected in the 1930's for testing anti-concrete projectiles.

The German 420mm (16 5in) 'Big Bertha' Krupp mortar, the road-mobile successor of 'Gamma'. Twelve of the two types fired in World War I, at Liege, Namur, Mauberge, Antwerp and Przemysl. They were withdrawn at Verdun.



Fig. 100



or no restriction upon it except time and money, while the artillery were hamstrung by the problem of mobility. Whatever gun they designed had to be brought to the battlefield, and the only way to bring it was by teams of horses or oxen, a fact which automatically put a limit on size and weight.

As a result of this, the fortress builders finally reached a point where they had developed concrete and armor protection capable of resisting the largest mobile guns. They then armed their works with a larger calibre of static weapon and rested content. The results of this policy could be seen in the massive forts of Brialmont and de Riviere on the Belgian and French borders, fortresses protected with 6ft of masonry topped with 3ft of sand and then with 5ft of concrete, armed with 210mm (8.3in) guns in armored turrets.

Designers of artillery had, of course, tried to overcome the mobility problem from time to time. One of the most ingenious ideas was Mallet's 1855 Mortar. The barrel, of 36in calibre, was made of interlocking rings, secured in place by collars at breech and muzzle and a series of longitudinal





*An ugly metal monster—a 305mm (12in) gun abandoned by the Italian army during the battle of Caporetto in November 1917. It probably fired at Austrian defenses in the Julian Alps. British troops captured and used a similar gun, Sicily (1943).*

*1An improved British 12in Howitzer, the Mk IV of 1917 which was still in service 25 years later. A 20-ton box of earth kept the front of the gun down during firing of its 750lb shells. Range was only eight miles. The six traction-sections which the gun broke down into for moving, led to its nickname - 'Twelve-inch roadhog'.*

*2US 240mm (9.44in) Howitzer of 1942 vintage. In the 'short-range smasher' class, this weapon fired a 360lb shell to 25,225 yards. Barrel and mounting moved on two separate transport wagons pulled by 39-ton tractors. This gun was brought into action with the aid of a 20-ton crane. The US also used a 'partner-piece'—an 8in gun having a longer range*

bars locked in place by keys and wedges. The whole weapon could be dismantled and transported piecemeal, no part weighing more than 12 tons

Once assembled it could fire a 2,400lb shell to about 3,000 yards. The British Prime Minister Lord Palmerston embraced the idea with great enthusiasm, seeing the mortar as a solution to the prolonged siege of Sevastopol, and urged that two be built. But manufacture took far longer than expected and the weapons were not ready until March 1857—almost a year after the Crimean War had ended. One was test fired and sustained some damage, while the other never fired, can be seen outside the Royal Artillery barracks at Woolwich, in South East London

In 1904 the Japanese besieged Port Arthur and astounded the world by bringing 280mm (11in) howitzers on to the battlefield. These were coast defense howitzers which had been modified to allow them to be moved in pieces and assembled over a three-week period at the firing position. With these weapons the Russian fleet was immobilized and the fortress defenses shattered, and armies began to look again at the question of moving heavy artillery

In Germany, Krupp developed a 420mm (16.5in) howitzer known as 'Gamma', and from this he derived a more mobile equipment which went down in history as 'Big Bertha' after two of them were used to demolish the Belgian forts at Liege in 1914. Their 1,800lb shells were specially designed with hardened tips and base fuzes in order to tear through armor and concrete and burst deep inside the

vitals of the forts. Within three days their terrible bombardment had reduced the Liege defenses to impotence

World War I itself eventually turned into a gigantic siege, and the artillery of both sides reflected this in the quantity of heavy guns introduced in order to do more and more damage to the complex defensive lines on each side of No Man's Land. Britain produced 8in, 9.2in, 12in and even 15in howitzers, some transported piecemeal by road and some mounted on railway trucks, while France went so far as to produce a 520mm (20.47in) monster on a railway mounting

Between the wars the improvements in air power led to a good deal of argument as to whether or not heavy artillery was the decisive factor and big guns were retained by all the major armies. With improvements in mechanical traction heavy guns could be moved and emplaced relatively quickly, and the German Army produced a number of outstanding designs. But the course of the war proved that the earlier arguments in favour of air power had been well founded, and at the end of the war the bomber could do most of the tasks previously demanded of siege artillery. By 1945 the big gun was on the way out, and the arrival of the missile and the nuclear warhead accelerated the decline. Today, with the exception of a few propaganda cannon paraded periodically in Moscow, the armies of the world have nothing larger than 8in guns

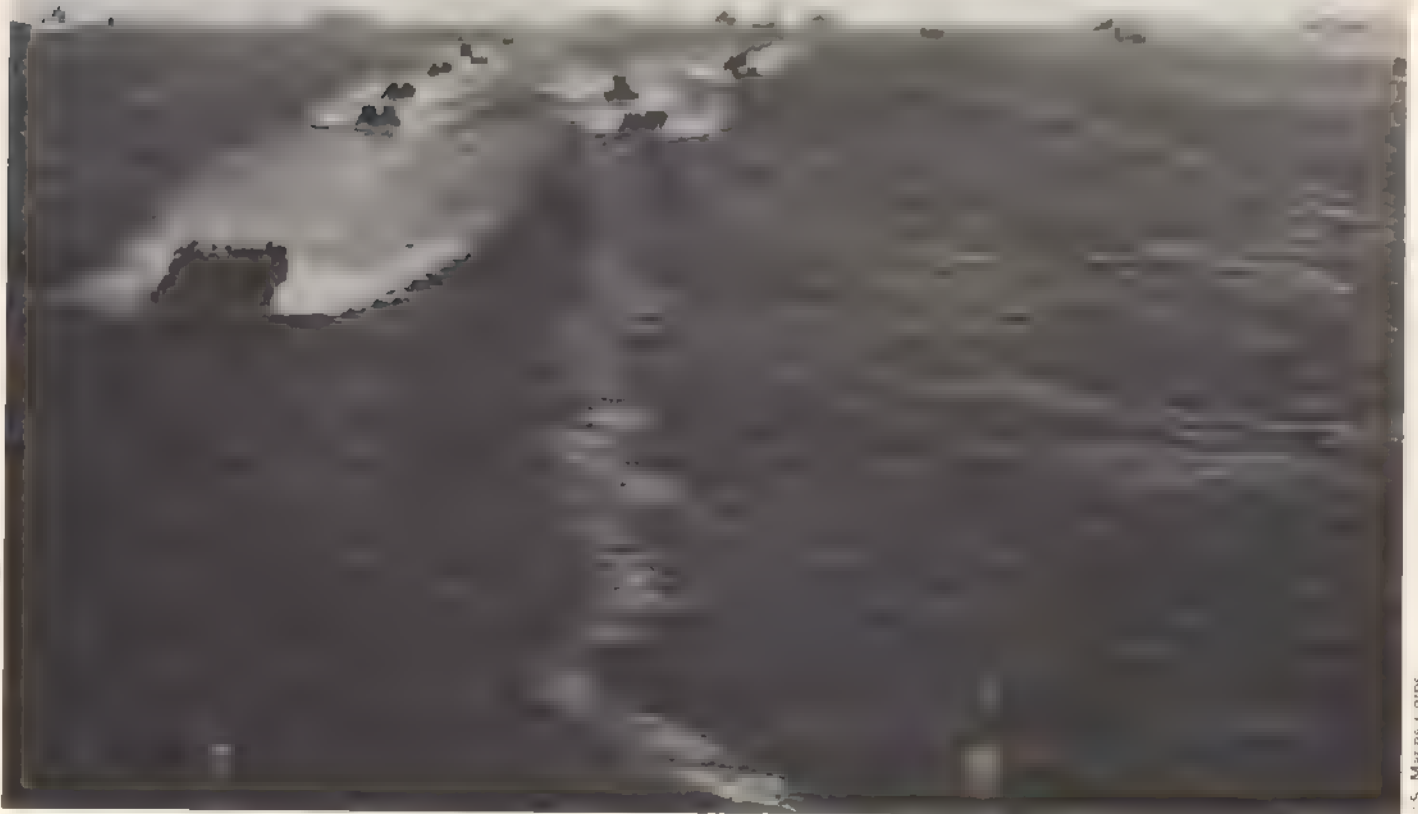
Ian Hogg





# INCHON

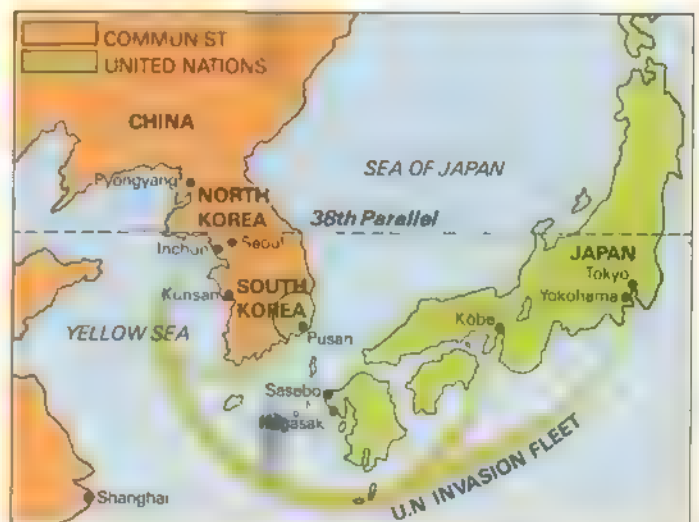
MacArthur planned to stop the communist drive into South Korea. Inchon fell easily—then the Marines faced Seoul . . .



U.S. Marine Corps

The Inchon landings of September 1950 were to prove the turning point of the war in Korea. General Douglas MacArthur conceived of the landings as a way of breaking the Communist stranglehold on the South. When UN forces had succeeded in taking Inchon they were to push on to the main prize—the South Korean capital, Seoul. The struggle for the control of this city was to prove the most savage of the whole war.

On Saturday 24 June 1950 United States President Harry S. Truman heard some grim news. Secretary of State Dean Acheson telephoned—the North Koreans had invaded South Korea. He advised the President to call on the United Nations Security Council to declare that an act of aggression had taken place. The following day Acheson called again. There was no doubt that a full-scale invasion had taken place but the United Nations was unlikely to do more than call for a cease fire—and the call would probably be ignored. The United States therefore had to decide what degree of



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◁ Operation 'Chromite', the assault on Inchon, begins on 14 September as landing craft move away from the transports with their cargoes of Marines. The initial landing, by the 5th Marines on Green beach at Wolmi-do, was tense but easy, the invaders suffering no fatalities.

▷ With resistance still light, an amtrac heads for the beach. A smoke pall clouds the sky as buildings burn following the pre-landing shelling and bombardment.

▽ Timing on the beaches was crucial—a miscalculation of the tide at the peninsula at Wolmi-do would have spelled disaster for the Marines. It was vital to reach the causeway at high tide, the thick mud at low tide would have been impossible to negotiate in the heavy battle order. But mistakes were not made and the Marines, having established a foothold, dig in as others are helped ashore.

◁▽ Course passage of the UN Invasion Force to Inchon. The 1st Marine Division embarked from Kobe on 3 September; the Pacific Fleet amphibious force flagship Mt McKinley left Tokyo to pick General MacArthur up at Sasebo on 12 September. The 260-ship armada arrived off Inchon on 14 September.



Associated Press



Associated Press

support, if any, it would give to South Korea

The Japanese surrender in August 1945 left the US and Russia in Korea and they decided on the 38th Parallel as a purely military demarcation line between their two forces. In September 1947 the US turned the Korean problem over to the UN. By this time Korea had become a pawn in the rivalry between the two major world power blocs. A UN call for all-Korean elections was ignored by the Russians and elections were held in the South only. In August 1948 the Republic of Korea (ROK) was established in the south under the veteran nationalist Dr. Syngman Rhee. In September the Democratic People's Republic of Korea was created in the north, with former guerilla leader Kim Il Sung as premier. There were now two mutually antagonistic Korean regimes, each claiming rights to the whole country and each backed by one of the two world power blocs. Sporadic fighting took place along the 38th Parallel and though the US believed an invasion of the south was

possible, Acheson admitted that 'its launching in the summer of 1950 did not appear imminent'.

Despite appearances, it had happened. President Truman, like most Americans, was acutely aware of the dangers of appeasement. The dictators had not been stopped in 1931 when Japan invaded Manchuria; in 1935 when Mussolini invaded Abyssinia or in 1938 when Hitler marched into Austria. The result was a massive and bloody war. If the US did not react to the aggression, so the reasoning went, the Communists would seek to extend their conquests and this would inevitably lead to a third world war. There were pressing domestic considerations too—failure to act would encourage the arch witch-hunter of Communists, Senator Joseph McCarthy, to charge the government with appeasement, possibly fostered by subversives within the President's own staff.

In Washington, the State and Defense Departments presented joint recommendations. General Douglas Mac-





Associated Press



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△ That causeway again! How important tidal information was is now evident. Any attempt to gain a footing at low tide would have been impossible

General MacArthur's jeep convoy halts by a number of knocked-out T34 85 tanks. The North Korean army had 120 of these Soviet AFVs, which were upgunned (85mm) T34s of 1944 vintage

While the initial landings had been found easy, North Korean resistance in parts of Inchon and before Seoul was bitter, both sides suffering high casualties. A US Marine Sikorsky helicopter drops down to evacuate Marines wounded during the fight for Seoul

Arthur, then stationed in Japan, was ordered to evacuate all Americans from Korea but to attempt to keep the key airports open. The US air force was to remain south of the 38th Parallel and ammunition and supplies for the South Korean army were to be delivered by air drop and other means. The Seventh Fleet was to sail to the Formosa Strait to prevent any possible conflict between the nationalist Chinese on Formosa and the Chinese Communist mainland. American policy had altered—Korea and Formosa now fell within the US defense perimeter.

To MacArthur, news of the invasion was like a nightmare a repetition of Pearl Harbor. As soon as he received orders from Washington he sent aircraft to evacuate Americans from Korea but did nothing else. But soon, orders came to commit US troops to the field and MacArthur took immediate action.

Events had given MacArthur a new role. After a successful military career in World War II and a smoothly-run administration of post-war Japan, MacArthur had little more to look forward to than an honored retirement. Now, as

commander of US, and later UN, forces in Korea he had another chance of glory and fame in the field. Thrilled by the challenge, MacArthur prepared his staff for his last great military campaign.

In the meantime, the UN voted to support American operations in Korea. MacArthur was now leader of a nominal UN force—nominal because, especially at the start, the only active participants were the retreating South Koreans and whatever American forces could be shipped or flown from Japan.

By the start of July, North Korean forces had crossed the Han river, pushing streams of dispirited ROK forces before them. At the same time, the first US combat troops arrived in Korea. MacArthur's arrogant hope that the North Koreans might 'turn round and go back when they found out who was fighting' came to nothing and on 19 July North Korean tanks smashed through American defenses at Taejon and rolled towards the Naktong river, the last major natural obstacle guarding the Pusan perimeter.

The Pusan perimeter was a 140-mile line running west



Associated Press

and north of Pusan, from the Korea Strait to the Sea of Japan. Organized by Lieutenant General William Walker, commander of the US 8th Army in Korea, the Pusan perimeter held out against intensive North Korean pressure while US tanks, artillery and troops arrived through the port to reinforce the bridge-head. UN aircraft flew sorties against North Korean supply lines and the enemy's failure to mass forces for a decisive penetration at one point along the perimeter also contributed to the Americans' ability to hold the line

By September 1950, the situation was deadlocked along the Pusan perimeter. Although North Korean forces seemed unable or unwilling to launch a major attack against the perimeter line, ROK and American forces were not of sufficient strength for a land assault on the enemy lines

MacArthur considered that the only way out of the *impasse* was to attempt an amphibious landing behind enemy lines. The risks involved in such an action were enormous. Failure would result in irreparable damage to UN credibility in Korea and devalue the stature of the

the organization. Its ability to effectively intervene in any crisis situation would be greatly impaired

The idea of landing at Inchon dated back to MacArthur's first visit to Korea following the start of open war between North and South. North Korean supply lines were stretched to the limit. A landing at Inchon would force the enemy to fight on two fronts. The result of this, MacArthur calculated, would be the total breakdown of enemy supply lines. As a result, they would be forced to withdraw from the Pusan perimeter within weeks

If a landing at Inchon was successful the UN would enjoy a considerable propaganda boost. It would also make possible the recapture of Seoul, the South Korean capital, 18 miles to the east

Codenamed Operation 'Chromite', plans for the Inchon landings went ahead. Meanwhile, thousands of reservists were sent from the West Coast of the United States to Japan. The first objective was to capture the island of Wolmi-do, at the entrance to the port of Inchon. Once taken, large numbers of troops could be brought forward, and the





Keystone Press

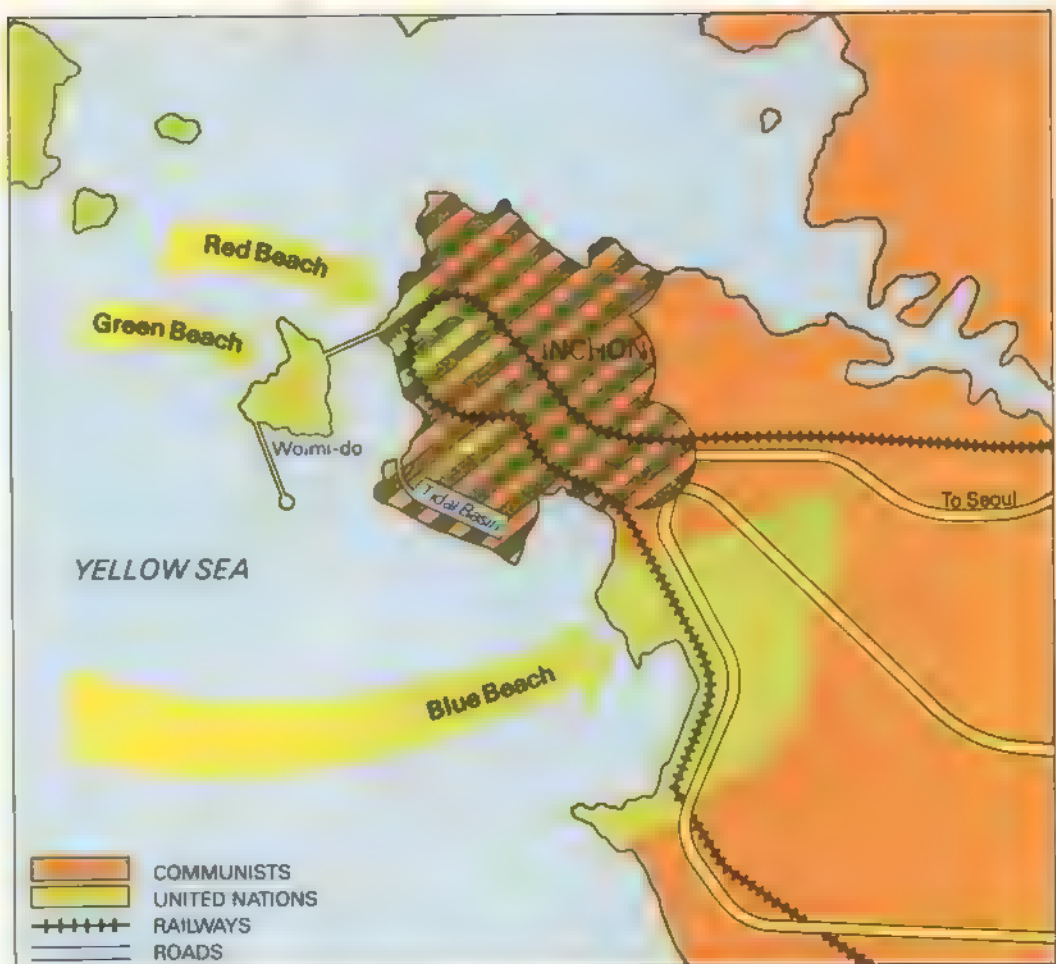


Associated Press

◁ After the fall of Seoul, North Korean prisoners squat apprehensively, guarded by impassive South Korean Marines before their removal to POW camps.

◁ Humiliation in defeat. Naked North Korean prisoners are marched along a road in the Inchon-Seoul area toward their eventual prisoner-of-war camp. When captured, prisoners were stripped and searched for hidden weapons. American soldiers move up.

▷ Disposition of the three-pronged attack on Inchon on 15 September. Green beach, hit by the 5th Marines at 0600, fell quickly after feeble resistance. Tide times made it necessary to wait until 1730 for the assault on Red Beach, the time-interval being taken up by bombardment from sea and air. The pincer movement was completed by the Marines going in at Blue beach and by midnight the North Koreans troops had fled.



island would act as a springboard for the invasion proper.

The next step was to capture the city of Inchon itself. The prime objective—the recapture of Seoul—would now be in the UN forces' grasp. To make this possible, Kimpō—Seoul's major airport—had to be taken. At the same time as preventing the North Koreans from bringing in reinforcements, control of the airport would allow the UN to do just that.

MacArthur fervently believed that the North Koreans would be forced to retreat. He thought that, while fleeing, they would be trapped between the UN troops controlling Seoul and the forces heading north—freed from their 'prison' behind the Pusan perimeter.

Once the plan for the Inchon landings had been constructed, it was necessary to select the right personnel to head the operation. It was decided that the 10th Corps, commanded by General Almond, would be landed at Inchon by Rear Admiral James H. Doyle. Doyle was Amphibious Group Commander of the Pacific Fleet. His flagship, *Mt. McKinley*, was anchored at Tokio. The landing force was to be in two groups—a marine division to push south and the 7th Division to cover their flank. Both these divisions would then form a defensive buffer against the North Koreans as the 8th Army moved north from the Pusan perimeter.

From the moment the idea of an amphibious landing had been mentioned, the Joint Chiefs supported it. But they were not so keen about the choice of Inchon as a landing place. Their reasoning was that because Inchon was far to the north and so near Seoul, the North Koreans would almost certainly put up a savage defense. Also, Inchon's

unusually high tides would make a quick and easy landing very difficult. UN casualties could be enormous before they even reached dry land. There was little room for failure. In contrast to the attitude of the Joint Chiefs, MacArthur had supreme confidence in his own judgement.

After much pressure, the Joint Chiefs finally gave MacArthur the go-ahead on 28 August, and the plan was finally ready for operation on 4 September. The assault on Inchon was set for 15 September. This date was chosen because the tide would be at its highest. Some doubts were voiced by navy and marine personnel—and rightly so. On that day the morning tide was at 0659 and the evening tide at 1919. A tide of at least 23ft was necessary to enable the LSTs to navigate their way to the narrow peninsula of Wolmi-do, from where the landings were to be staged.

It was planned that a Battalion Landing Team (BLT3) of the 5th Marines would land at *Green beach*. This was to take place at 0630 with the morning tide. The sea front of Inchon itself, *Red beach*, was to be taken by BLT-1 and 2 at 1730. Back-up forces bringing tanks, bulldozers and engineers in eight LSTs would be brought forward. The 25ft of tide would be just enough. Three heavily armed battalions would be landed at *Blue beach* simultaneously. Their task was to be the most demanding of all—to move forward and seize the main road and rail links between Inchon and the capital Seoul. Precise timing was vital for this operation. No margin of error could be afforded. Because of the tide, landing craft had to arrive and depart within a strictly laid-down time-table. Otherwise they ran the risk of being stranded on a sand bar.

MacArthur suspected that the Marines would have to use



ladders to go into Inchon. This suspicion was confirmed when Lt. Eugene Clark was sent to inspect the beaches in the landing zone. He discovered that the mud was waist-deep at the harbor wall.

To complicate matters still further, the North Koreans launched an offensive against the Pusan perimeter in early September. General Walton Walker, in the perimeter, feared that if the Marines left for Inchon the North Koreans would have taken over Pusan by the time the landings took place.

MacArthur insisted that his plan to land at Inchon was the only way to avoid a protracted conflict, as well as a likely UN defeat, in Korea. So, after further argument and appeal to President Truman for confirmation, MacArthur had his way.

About 70,000 men had to be transported from Japan and Pusan to Inchon. An armada of 260 ships from the United States, France, Britain, Canada, New Zealand and Holland was formed. They were to link with support units at a pre-arranged series of points.

Things seemed to be going smoothly when a typhoon blew in from the Pacific with wind speeds of up to 125mph. The ships held their course. And delay would have wrecked the whole plan. Remarkably, the typhoon passed—causing little harm.

The flagship *Mt. McKinley*, with MacArthur aboard, arrived off Inchon on 14 September. By this time the coast had been under almost continuous bombardment for five days. Wolmi-do was singled out for the heaviest of the fire in order to clear the way for one of the three planned landings.

#### Necessity for swift action

A thin causeway linked Wolmi-do with the mainland. If one of the mainland landings failed, UN troops could defend the island for some time while awaiting reinforcements. But for this to be feasible, Wolmi-do had to be captured swiftly.

The 5th Marines started to land on *Green beach*, on Wolmi-do, at 0633 on the 15th. It was held lightly and they encountered only scattered resistance. The total enemy presence on the island was around 350 men. By 0655 the 'battle' was virtually over and UN forces raised the flag on Radio Hill—highest point on the island. This first step in the Inchon plan which had caused the Chiefs of Staff so many sleepless nights, was completed by 0800. Wolmi-do had been captured without a single fatality.

UN forces bombarded *Red beach* from sea and air for the rest of that day. But the landing had to wait for the evening tide, 1730, and as the tide flowed in the landing operation began. This time, things did not go so easily for the UN forces.

There was a fierce battle for the control of Cemetery Hill in the city of Inchon itself. A North Korean bunker held down the Marines below a sea wall. But by midnight the Marines had established a firm line across Observatory Hill—and had complete control of *Red beach*. Within six hours, UN forces had entered the very heart of Inchon.

So far, things seemed to be running smoothly and to plan. A number of landing craft became stuck in mud some 300ft out from *Blue beach*, forcing Marines to wade ashore, and some vehicles stalled when a road collapsed. After a sea wall was dynamited, however, the landings at *Blue beach* were made easier. The Marines reached their objective by midnight and by the following day the North Koreans had fled Inchon.

Inchon had been taken at the cost of 196 casualties.

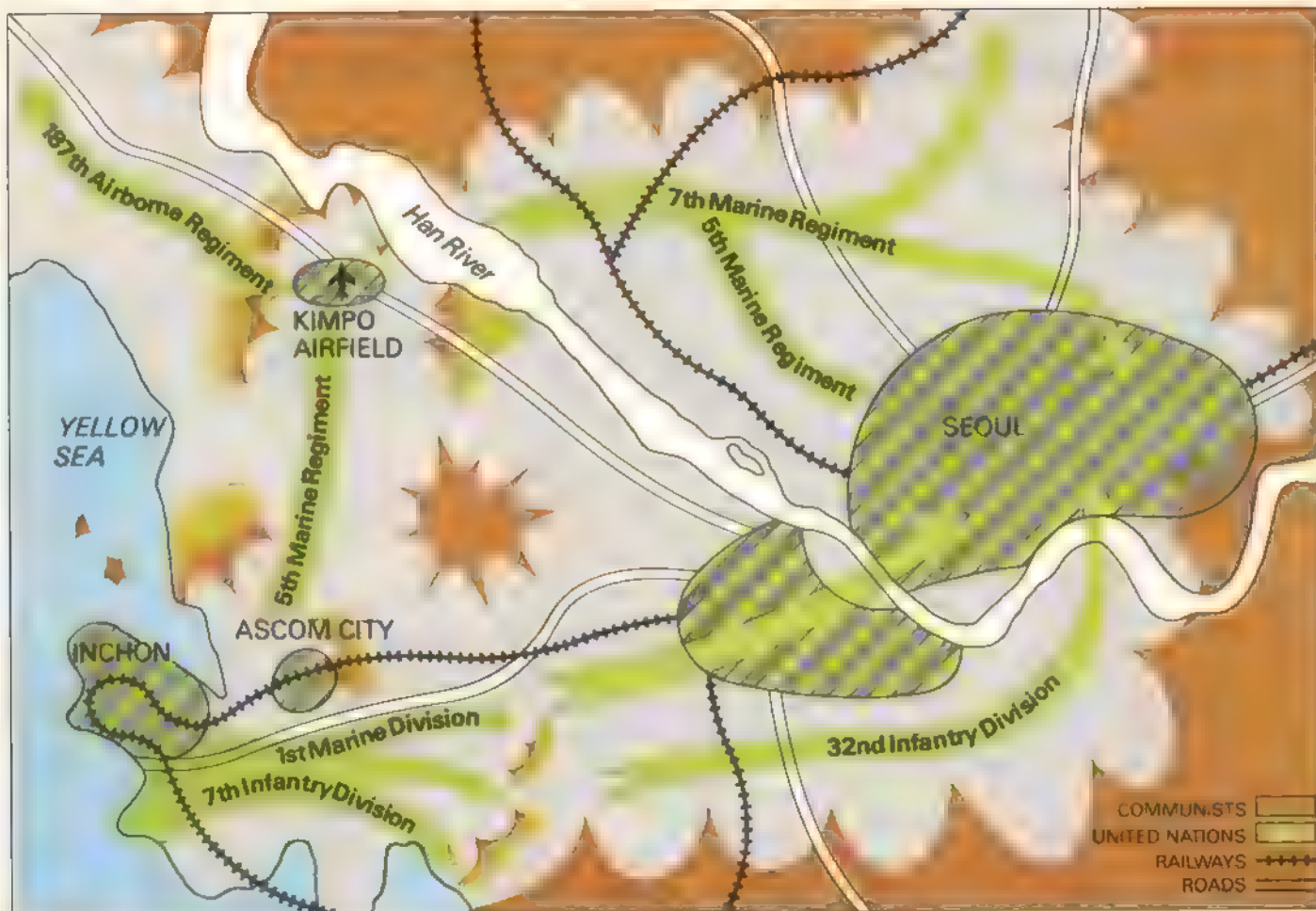


Malcolm McGregor

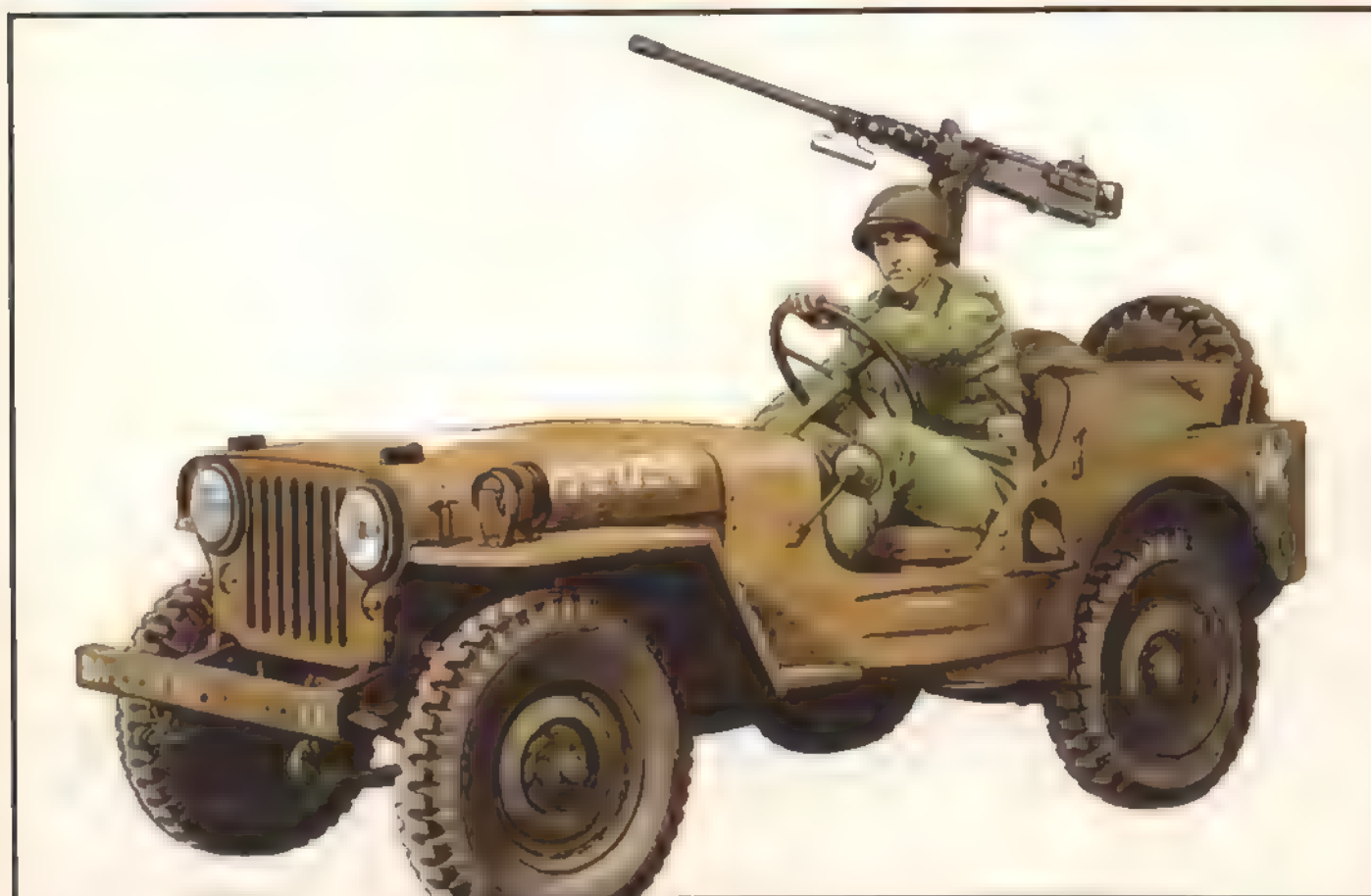
△ A sergeant of the North Korean People's Army. His three stripes are set on each of the shoulder epaulettes. The North Korean National insignia shows at the front of his cap. He is armed with a Russian 7.62mm M1944 carbine. This model is identical to the 1938 carbine, but carries a fixed cruciform bayonet which when not needed folds back down the right-hand side of the barrel. The North Korean sergeant carries World War II pattern ammunition pouches and a Russian stick grenade.

△▷ General MacArthur was wrong when he said Seoul would fall in five days—it took 14. The North Koreans had turned the city into a fortress. First target of the UN force was Kimpo airfield. When it was taken on 18 September it immediately became the base to which reinforcements and ammunition could be flown. Bombers used it to batter at Seoul itself. But such was the North Koreans' determination that it was not until 27 September that the US flag was raised above the 'Capitol of the Republic of Korea.'

▷ The ubiquitous jeep. It bounced and rattled its way through World War II and is still going strong. Here it is in Korea, armed with a Browning .5in heavy barrel M2 MG.



Davis Harrison V.P. Ltd



Marcolli McGregor



## Douglas Skyraider AD/1Q



Span 50ft  
Length 38ft 6in  
Height 12ft  
Engine 2,700hp Wright  
R3350-24W piston engine

Max speed 300kts  
Service ceiling 24,500ft  
Combat range 1,250n/m  
Weight 10,970lb  
Weight loaded 17,000lb

*The Douglas Skyraider was due for retirement at the onset of the war in Korea. But this conflict kept the production lines running until 1957, when the last Skyraider, an AD version, was completed. By that year no fewer than 3,180 of this aircraft had been manufactured. This day-attack, all-weather, counter-measure version was still in service in 1962.*

Peter Sarson Tony Bryan

including about 20 dead. The Joint Chiefs' fears had been proved unfounded and MacArthur's stock had never been higher. But it still remained to capture Kimpo airfield and Seoul itself. This had to be done quickly, but it was not going to be so easy.

The North Koreans had decided to abandon Inchon to avoid unacceptably high losses. However, they intended to dig in their heels at Seoul. The capital was turned into a virtual fortress.

Once Inchon was theirs, MacArthur, Almond and Admiral Struble visited the battlefields. MacArthur believed that he could take Seoul within five days. Almond thought it would take almost a fortnight. Almond was right.

The first target—Kimpo airfield—was captured on 18 September. As it happened, Kimpo was hardly used at all by the North Koreans, but within days it became one of the world's busiest airports as the Americans airlifted-in reinforcements. It seemed inevitable to the Americans that Seoul must fall very soon. But they had reckoned without the ferocity of the North Korean defense of the city. The Americans had to bombard the city with all the firepower they possessed. Many civilians were trapped and burnt to death in an inferno from which there was no escape.

MacArthur was a great respecter of the virtues of technology. He believed that tanks, artillery and aircraft should be used to the full in order to save lives. The North Koreans, however, were not equipped with so much sophisticated hardware and, consequently, thought quite differently. Almost all they had was men. They were to fight to the last.

To the Americans, Seoul was a political symbol of the first importance. If this had not been the case, it would have been possible—and certainly wiser—to by-pass the city and join up with the northward bound 8th Army. MacArthur, however, was determined to capture the city and had

to pour in more and more forces in the attempt to do so. In Seoul itself there were 20,000 North Koreans who were determined to fight it out until every one was dead.

This was unfortunate for the citizens. Living in Seoul soon became a nightmare. Prior to the Marines moving into the city, aerial bombardment had devastated whole districts. The badly built wooden dwellings of most of the people were burnt to the ground. Often, their owners went with them. North Korean suicide squads threw themselves at the advancing tanks but failed to slow them in any way.

When the Americans finally entered the city, most of the defenders were dead. Thousands of civilians—men, women and children—had been slaughtered and many more were horribly maimed by fire. Panic-stricken homeless refugees were everywhere.

The situation was made still worse as the surviving North Koreans fought a last-ditch, street-by-street battle with the Americans. This fighting was desperate and vicious. Intense heat from the burning buildings added to the horror. The fighting continued until 27 September when the Marines reached the 'Capitol of the Republic of Korea' and raised the American flag above it. By the time the North Korean defenders were finally overcome, more than 130,000 prisoners had been taken.

On 29 September MacArthur entered the shattered city and in the South Korean National Assembly pronounced that Seoul was restored as the seat of government. On that same afternoon he returned to Tokyo. As a city, Seoul suffered one of the greatest hammerings to be perpetrated in modern warfare. Thousands of its people were dead or homeless. Its buildings were mostly rubble. MacArthur had confounded his critics and scored the greatest triumph of his military career.

Sydney L. Mayer

# ACRE 1799

A 'miserable fort', it held 13,000 Frenchmen at bay for 63 days. For Bonaparte it was his first bitter taste of defeat



Frank T. Sabin/Chris Barker

Napoleon Bonaparte saw before him only a low wall, covering a third-rate town held by a handful of Turks and British sailors. Beyond Acre, in 1799, lay his self-appointed destiny. 'When I have captured it, I shall march on Damascus and Aleppo. I shall arm the tribes. I shall reach Constantinople. I shall overturn the Turkish Empire.' Long afterwards, on St. Helena, he said: 'In that miserable fort lay the fate of the East.'

Bonaparte, after victories in Italy which astonished Europe, had had himself appointed in 1798 to command the French Army of the Orient. By the end of the year he had subdued Egypt and felt sufficiently secure to turn his attention on Syria. When writing to the Executive Directory in Paris he spoke only of reducing a hostile neighbor, of bringing the Turks to heel, and of depriving the British Levant Squadron of its bases along the Syrian coast. In his more extravagant moods he talked of returning to Paris via Damascus, Aleppo, Constantinople and Vienna, overthrowing the Turkish and Austrian Empires en route. He even considered marching on British India.

The Army of Syria, nearly 13,000 strong, crossed from Africa into Asia in February 1799, thus entering the *Pashalik* of Acre—one of five constituting Syria and Palestine within the Turkish Ottoman Empire. Bonaparte was taking the best half of his army from Egypt. He organized it into four small infantry divisions, made up of 11 weak demi-brigades; 800 cavalry; 400 *Guides-à-pied et à-cheval*; 88 camel riders; 1,385 gunners for 46 field-pieces and two seaborne siege-trains; and 340 engineers.

The advance northwards was swift. El Arish fell after two weeks on 20 February, Gaza on the 25th, Jaffa on 7 March after three days, Haifa on the 17th. At Jaffa, Bonaparte conformed to local custom by massacring 5,000 of the garrison. After one encounter with cavalry from Acre the

△ Acre's guardians—two British ships of the line, *Theseus* (left) and *Tigre* (right). This aquatint is based on the surgeon's sketch. The breach is visible, left of mosque



Davis Hanson V.P. Ltd

French skirted Mount Carmel, crossed the river Kishon and appeared before the city on 18 March.

For the Pasha anxiously waiting in his capital, the massacre at Jaffa served notice that others could emulate the calculated cruelty of the last quarter of a century with which he had ruled the province and which had earned him the



title 'al-Djezzar'—the Butcher. Determined to preserve his ill-gotten gains from Sultan Selim III in Constantinople the independent Pasha had spent the last 12 years strengthening and modernizing the defences of the old Crusader castle which guarded the capital and erecting heavy guns to cover the sea-approaches. But now it was a French army moving rapidly from the south which threatened him.

But news of the French invasion of Syria had reached Constantinople where all differences with Djezzar were forgotten in the face of the common infidel foe; the Sultan was painfully aware that should Acre fall there was nowhere south of Aleppo to make another stand. The news also reached the British Levant Squadron blockading Alexandria. Commodore Sir William Sidney Smith, after two years in the notorious Temple prison in Paris, had every reason to bear a grudge against the French Republic in general and against Citizen Bonaparte in particular. The Sultan appointed 35-year-old Smith the Commander-in-Chief of the Turkish forces.

### A genius for fortification

His first act was to send the 74-gun ship of the line, HMS *Theseus* under Captain Ralph W. Miller, who had been with Nelson at the battle of the Nile the previous August, to bolster the defence of Acre. With him went a 30-year-old French Royalist artillery officer with a genius for fortification, Colonel Louis-Edmond de Picard de Phéliepeaux, who had detested Bonaparte since cadet days at Brienne Military Academy more than 15 years earlier. It was Phéliepeaux who had spirited Smith out of the Temple prison the previous April, in classic fashion by seducing the jailer's daughter.

*Theseus* reached Acre five days before the French. Two days later, Smith arrived at Acre in HMS *Tigre* (80 guns), a French prize captured in June 1795. The seamen landed more guns to reinforce the 250 already on the ramparts, most of which were pointing towards the sea, as well as 1,200 bombs, 4,000 cannon-balls, and a huge quantity of gunpowder. On 18 March, the day the French appeared, *Tigre* captured the seven vessels off Mount Carmel, carrying their entire siege-train up the coast from Damietta. The guns, four 24-pounders, four 18-pounders and four 8in mortars, were added to the defences and the vessels were armed with field-pieces and anchored around the castle to act as gun-boats. Although Captain Stendlet, the commander of the flotilla, escaped with a corvette and two sloops, Smith had virtually crippled the French by taking their heavy battering guns. Bonaparte was left with only his field artillery—four 12-pounders; four 8-pounders; four howitzers; four 6in mortars and 30 puny 4-pounders.

Despite this setback the French soldiers remained confident that since Jaffa with 8,000 defenders had fallen in three days, Acre with only 3,000 would fall in less. But Acre stands on a rectangular point of land washed on two sides by the sea. The British men-of-war, *Tigre* to the south and *Theseus* to the west, were able to sweep the entire length of the walls with their massive broadsides while the gun-boats were stationed to batter any siege-works that might be built and to enfilade the trenches. Bonaparte, having made a reconnaissance with his Chief Engineer, General Caffarelli du Falga and Chief of Artillery Cousin de Dommartin, decided to concentrate the attack on the NE corner of Acre's 1,000 yard walls which, although the further from the sea, was also the strongest sector.

The siege formally began on 20 March with the opening of the first parallel very close in at 300 yards. Jean-Baptiste

### Private Marines 1799



Malcolm McGregor

Kléber, General of division, with more experience of siege than Bonaparte, warned him about the trenches: 'Damned funny trenches they have made here. They may be all right for you, general, but as for me, they hardly reach up to my waist.' Kléber was no admirer of Bonaparte. On one occasion he was heard to say, 'There goes the little scoundrel; he's no bigger than my boot.' But he was right about the trenches.

By 24 March a small breach had been made 20ft above the moat in the large NE-corner tower (which the French were soon to know as the 'Accursed Tower') and a mine had been blown under the counterscarp (outer slope of the ditch). But the attack by grenadiers and sappers with 12-16ft scaling ladders were repulsed, as was an assault on the

◀ One of 800 Marines ('Royal' from 1802), taken from the whole Levant squadron landed during the siege. This Marine has a 1762.78in sea service musket. In their element as a disciplined, stiffening core of infantry and gunners, the Marines 'attacked like heroes... death only checked their bold career' testified the French Chief of Staff, Gen. Alexandre Berthier, after the 7 April sortie in which Maj. Thomas Oldfield was killed. Meeting George Beatty, once a marine officer in Theseus Napoleon called Oldfield 'the bravest man I ever fought'.

▷ Crisis on 8 May, Djezzar plucks Sir Sidney Smith into cover as sailors charge



Many Evans Picture Library

counterscarp

Meanwhile, the defenders were joined by the 20-gun sloop of war HMS *Alliance*, Captain Wilmot. Soon after, a violent gale blew up from the south and forced *Tigre* and *Theseus* to sea for more than a week. The French took advantage of the respite from their fire and pushed their approach trenches or saps up to the counterscarp and even into the 15ft ditch. They also made a lodgement on the crown of the glacis (the edge of the ditch) and sprang a mine under the great tower. On 1 April General of division Jean Lannes stormed the breach at the head of the army's 1,000 grenadiers, but was driven back. Bonaparte was watching from the forward trenches when a shell exploded above him. Two corporals of his *Guides-à-pied* threw themselves across him, and the general emerged from the shell-hole slightly injured with one of his protectors more seriously wounded.

The two men-of-war were able to return on 3 April. Three days later Smith wrote a hasty letter to his mother, 'I am here amusing myself in my favourite way, harassing the heroes of the great nation.' Bonaparte quickly realizing that the British sailors and marines were the key defenders, ordered 150 marksmen into the front-line trenches to pick them off. Smith therefore advised his men not to wear hats which distinguished them from the Turks.

Already both sides were running out of ammunition. Smith and Bonaparte sent urgent requests for more to be sent. In the meantime they resorted to desperate measures. The French would drive wagons into the line of fire of the British boats, so attracting a shower of cannon-balls which the men collected 'in the midst of the cannonade, while laughter resounded on every side.' For these they were paid at a rate ranging from 20 sous for a 36-pounder to 10 sous for an 8-pounder; by mid-April they had gathered 4,000. Capt. Miller in *Theseus* specialized in collecting unexploded French shells which he re-armed and used again.

The besiegers had by now established two batteries at 120 yards and four at 200 yards ready to bombard the walls

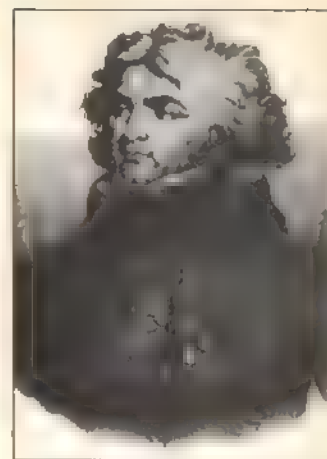
with the ammunition they had accumulated. They were also preparing to spring another mine under the great tower which was causing the besieged considerable anxiety. A major onslaught was clearly imminent. Reinforcements were expected from Rhodes; Smith would stand on *Tigre's* quarterdeck scanning the western horizon with his telescope, but day after day there was no sign of them. Djezzar spoke of evacuating Acre while there was still time; Phéliepeaux heard the rumour and rushed to the palace: 'Have a little courage; The Army of Rhodes will soon be here, and our salvation till then lies in counter-attack.'

At dawn on 7 April words were put into action with a sortie into the mine by sailors and marines under Lieutenant Wright of the *Tigre*. Wright was shot twice before he even reached the mine but fought on beside his pikemen. Forcing their way down the shaft, they pulled down the props and beat a hasty retreat under cover of *Theseus's* guns. Wright collapsed and was dragged to safety by Colonel Douglas, but Major Thomas Oldfield also of the Marines was killed. The Turks meanwhile caused a diversion by attacking the trenches on either side, returning with muskets, much-needed entrenching tools, and over 60 French heads.

Bonaparte ordered Oldfield's body to be retrieved for any papers that might be on it, particularly as he believed it to be that of his old enemy Phéliepeaux. General Rampon called for six grenadier volunteers; half were shot down, but the body was retrieved with the aid of a harpoon.

While the fighting raged at Acre, the French covering forces were also hotly engaged. On 8 April the Pasha of Damascus crossed the Jordan to relieve the beleaguered town. The entire relieving force had concentrated on the Plain of Esdraelon near historic Mount Tabor and now numbered 25,000 cavalry and 10,000 infantry. Kléber sent word to Bonaparte that he was about to attack and launched his 2,500 troops against the enemy at daylight on 16 April. Surprise was lost and he found himself surrounded for ten hours until ammunition was almost exhausted. 'We would gladly have given up the little bread we had for





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△△ Gen. Kléber 1754-1800  
 △ Bonaparte, 1798  
 ◁ Naval crossfire, much of it from captured French ships, made Acre impervious, either to siege or assault in spite of two breaches, shown both sides of the Accursed Tower. Turris Maledicta was also Richard the Lionheart's main 1191 point of attack, from his 100ft mound. Not using cannon and with naval help, he took Acre.

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some bullets and gunpowder . . . we had not time to eat,' wrote a soldier. Only the arrival of General L. A. Bon's division, cavalry and eight precious cannon force-marched by Bonaparte from Acre saved them. The Turkish masses were split asunder and pursued in the directions of the Jordan and Nablus. Kléber forgot his earlier remarks so far as to exclaim: 'General, you are as great as the world!'

After spending a night in Nazareth, Bonaparte returned to the desperate struggle at Acre. Growing bitter with failure, he ordered all communication with Smith to be cut off. There had already been an exchange of prisoners, but Bonaparte now claimed that Smith had deliberately sent the French prisoners to Toulon on plague-infested ships, adding: '... anyway, this man is some kind of idiot.' But by 24 April all was ready for the big effort which he hoped would settle the matter once and for all; enough ammunition

had been collected for a steady bombardment and the mine was now estimated to be immediately under the great tower.

At dawn six batteries opened up in an attempt to silence the defenders' guns, while all the grenadiers under General Lagrange waited, fortified with brandy, in the trenches. But there had been a miscalculation, and when the mine was sprung five hours later only one side of the tower collapsed. Nevertheless 30 grenadiers sprang forward to take advantage of the surprise; the Turks threw rocks and hand-grenades, and when these failed to stop them, hurled two or three powder kegs which exploded among the Frenchmen. Few survived.

The following morning the French launched another furious attack on the tower, and this time 100 men fought their way into the lower storey while the defenders held on to the upper, thrusting grenades and shells through a hole



in the ceiling. For two days and a night the survivors clung tenaciously to their precarious lodgement, before finally being driven out.

For six weeks now Bonaparte had been conducting the siege without a proper siege-train. But on 8 April Rear-Admiral Perrée with the frigates *Junon*, *Alceste* and *Courageuse*, and the brig-corvettes *Salamine* and *Alerte* had escaped from Alexandria after the blockaders had gone to Cyprus for water. He steered for Jaffa and on 15 April landed three 24-pounders, two 18-pounders, two mortars and four of *Junon's* 18-pounders. By the end of the month these guns had been dragged overland to Acre and placed in battery.

The besieged had also been busy. Phéliepeaux had constructed ravelins, inverted V shape outworks, on the north and east walls, only 10 yards from and flanking the nearest French approaches. He had also dug trenches to hold on to the glacis. On 30 April a SW gale sprang up and prevented *Tigre* and *Theseus* from using their guns. But Bonaparte bombarded the castle with 30 guns for the whole of that day and until noon on 1 May, when 2,000 French once again advanced to storm the breach.

From the ravelins, the trenches, the ramparts, and from the breach itself a hail of shot swept the columns and the doomed attackers fell in swathes. The leading six Frenchmen were instantly shot at the top of the 30ft wall they had scaled with ladders. Even the defenders were moved by such courage. 'It is impossible', Smith wrote to Admiral Lord St. Vincent, 'to see the lives of even our enemies thus sacrificed, and so much bravery misapplied, without regret.' After four hours the French finally gave up their fourth major attack and marched back to their camp in the village of Manshiya. During the next two days they made two unsuccessful attempts to capture the ravelins which now had cannon as well as the Marines to enfilade charges up the breach itself.

On the morning of 2 May Phéliepeaux died soon after his opposite number Caffarelli. For seven weeks the Royalist had worked day and night in defense of Acre, but had now 'fallen a sacrifice to the zeal for this service', from a fever brought on by sunstroke and sheer exhaustion.

### Driven near to despair

On the night of 4 May, General Rampon led the *eclaireurs* (scouts) of the 18th and 32nd Demi-Brigades in an attack on the trenches dug into the glacis while a false attack was made on the north ravelin. But Djezzar had hung lanterns on the walls and they were repulsed. On 6 May another sally was made into the French mine and the shaft was filled up. Turkish warships escorting 30-40 transports at last hove into sight bearing 7,000 men of the relief Army of Rhodes under Hassan Bay. Driven near to despair by their appearance, the French replied with attacks more furious than any yet seen.

Generals Bon, Vial, and Rampon led the 18th and 32nd Demi-Brigades against the ravelins and the trenches dug into the glacis. Three 24-pounders bombarded the curtain wall to the right of the great tower and it collapsed in sheets, leaving a new breach. Another assault was ordered for that night by Lannes' division led by General Rambaud. The defenders were ready: in the lighthouse was a French brass 18-pounder manned from *Theseus*; in the north ravelin a 24-pounder manned from the *Tigre*, both loaded with grape. By the harbor mole in two captured *djermes* were two 68-pounder carronades loaded with shells. In charge was Mr.

Bray, carpenter of *Tigre*. But the Army of Rhodes was becalmed, and although rowing ashore was still too far away to play a part in the immediate struggle.

The French faced the most appalling cross-fire. Yet still they came forward. They stormed the north ravelin and fought their way into the great tower, hoisting the tricolor on the outer angle. It still flew there at daybreak as the attacks were renewed. Smith landed the ships' crews and led them armed with pikes into the breach, where the few remaining Turks were rolling stones on top of the French. 'Djezzar Pasha, hearing that the English were on the breach, quitted his station where, according to ancient Turkish custom, he was sitting to reward such as should bring him the heads of the enemy and distributing musket cartridges with his own hands. The energetic old man, coming behind us, pulled us down with violence, saying if any harm to his English friends happened, all was lost.'

The crisis passed and by late morning the reinforcements had landed. Smith ordered Lieutenant Colonel Soliman Aga of the Sultan's Chifflick Regiment to lead his 1,000 infantry in an outflanking movement, to occupy the third French parallel, and there to 'fortify himself by shifting the parapet outwards.' But the attack was repulsed and the Turks had to withdraw under cover of the 68-pounder carronades firing grapeshot. Nevertheless the sortie forced the French to expose themselves above their parapets, and those remaining around the tower were killed or dispersed by artillery fire and by the last of the grenades thrown by Midshipman Savage of the *Theseus*.

### Bayoneted to cries of encouragement

Just before sunset Smith could see Bonaparte and his staff on the Richard Coeur de Lion mound, where the English Crusader king had pitched his tent during the siege of 1190-91. From his gestures he deduced that another attack on the north wall was imminent and signalled the *Tigre* to join the *Theseus* to the west as the shallow-draught Turkish warships now covered the east wall. This time, he planned to let the French enter Acre proper before destroying them. General Lannes led the assault in person up the new breach, wide enough for 50 men abreast. They entered the garden of Djezzar's palace *Seraglio*, only to be surrounded by overwhelming numbers and bayoneted to cries of encouragement from the Pasha's women on the rooftops. General Rambaud was killed and General Lannes was wounded for the second time by a bullet through the neck; 150 of their stormers were killed or captured. In the hand-to-hand fighting, many British officers found that they were exchanging blows not only with the French, but also with the Rhodes Turks, who, in the dusk, could not distinguish between the uniforms. At last, after 25 hours ceaseless struggle, the French fell back.

Bonaparte would not accept defeat. He summoned Verdier's brigade of Kléber's division (25th and 75th Demi-Brigades) so that they might 'participate in the glory of taking Acre'. Early on the morning of 10 May the grenadiers of the 75th and 19th Demi-Brigades were ready. Bonaparte declared: 'This miserable shanty town has cost me a great deal of time and many men, but things have gone too far: I must try a last assault.' One colonel said 'If Acre does not fall to-night, be sure that Venoux is dead.' A few moments later his headless body lay upon the breach. Some of the men entered the town, only to face second and third lines of defense which Phéliepeaux had constructed.

But that same night the grenadiers of the 25th Demi-





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*Acre—the hinge of fate, at sunset on 8 May. The Crescent still flies from the Accursed Tower, and the breach. Sidney Smith and Al Djezzar Pasha direct the defense while the Turks and Albanians win some grisly trophies from French grenadiers trapped inside. Napoleon felt the defeat, inflicted by 'the man who made me miss my destiny', more deeply than any other reverse up to the Retreat from Moscow. Yet the vanity of Wellington's 'mere vaporiser' was needed to cope with Napoleon. The siege provides a classic example of seapower, ideally placed, thwarting a land army.*

Brigade demanded to be allowed to return to the assault. Bonaparte gave the signal. Murat led a diversionary attack, while 'Kléber, with the gait of a giant, with his thick head of hair, had taken his post, sword in hand, on the bank of the breach, and animated the assailants. The noise of the cannon, the enthusiastic shouts, the rage of the soldiers, and the yelling of the Turks, mingled with the bursts of his thundering voice.'

Bonaparte stood on the breaching battery watching the terrible onslaught through his telescope, while his staff fell dead around him. Then the explosion of a mine brought the columns to a standstill, 'the troops notwithstanding, persevered with an incredible ardor. Kléber, in great rage, struck his thigh with his sword.' General Bon was mortally wounded and Bonaparte, seeing he had lost the gamble, called off the attack, crying out: 'Sidney has spoiled my destiny!'

On 13 May Smith managed to spare *Theseus* for long enough for her to pursue Perrée's squadron. The next morning she sighted it and gave chase. As she closed for battle the carpenter, assisted by a midshipman with mallet and spike-nail, was still busy in the captain's stern-cabin extracting fuzes from the shells Capt. Miller had collected. A spark ignited one of them and they all, 20 36-pounder and 50 18-pounder shells, exploded, setting the ship on fire in five places. The captain ran from the forecastle to see what was going on and fell dead with a splinter through his body. Forty died and 47 were wounded. The *Theseus* hauled off as Lieutenant England fought to save the ship, and Perrée escaped.

On 15 May the final 72-hour French bombardment ceased, Bonaparte claiming to have razed Djezzar's palace and the ramparts and to have reduced Acre to 'a pile of stones'. But the Chifflick Regiment emerged from the ruins on 16 May and fought with Verdier's brigade in the trenches for three hours before retiring.

Bonaparte wrote to the French Directory in Paris, 'The time seemed favorable to carry the town; but our spies, deserters, and prisoners all agreed that the plague was ravaging the town of Acre.' In fact the plague was already ravaging the French camp, where it went by the name of

'fever'. Orders were given for the retreat. Dommartin was first to fire off the remaining 24-pounder ball and grape ammunition and then throw into the sea all the 23 guns which could not be carried off. Rear-Adm. Perrée was ordered to take off the wounded and sick at Tantourah 24 miles south of Acre, but he, believing discretion to be the better part of valor, set sail for France, only to be captured with his entire squadron off Toulon on 18 June.

During the night of 20-21 May, after 63 days before Acre, the army, reduced to about 7,500 fit men, began the long march across the scorched sands towards Egypt, burning and destroying as it went. They were pursued by 2,000 Turkish cavalry and bombarded at Gaza by the British squadron. They left behind them the bodies of eight generals and some 80 of the finest officers; 2,200 men perished, and the casualty list also included 2,500 sick and wounded. This was the price paid in more than 40 attacks on Acre, including 11 major assaults, and fighting off 24 sallies by the defenders.

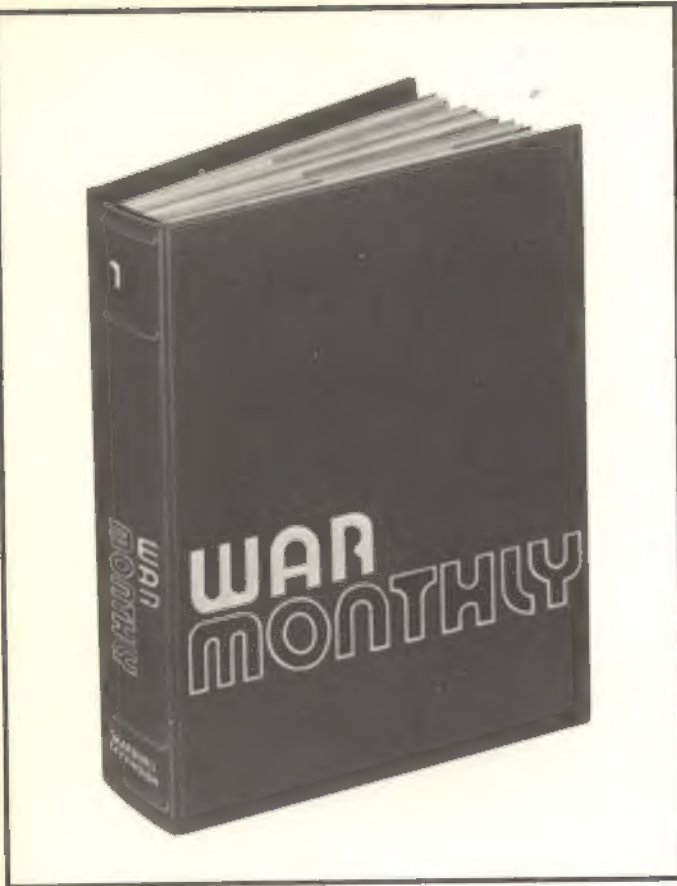
At Jaffa Bonaparte tried to persuade the Physician-in-Chief to poison the worst of the plague cases, but Desgenettes refused, saying that his profession was to preserve life, not destroy it. Most of them were loaded on to ships with the wounded and the 12-pounder and 18-pounder guns which could be dragged no farther. Without water, provisions, or seamen, they had no choice but to steer for the British squadron and surrender.

By early October Bonaparte had abandoned his army and was back in France; by the middle of December he had overthrown the Directory and made himself First Consul.

From Cyprus Smith returned to Constantinople to arrange further schemes for the expulsion of the French from Egypt. He received the thanks of both Houses of Parliament and a pension of £1,000 a year. Rear-Admiral Lord Nelson wrote to him: 'The immense fatigue you have had in defending Acre against such a chosen army of French villains headed by that arch-villain Bonaparte, has never been exceeded.' Bonaparte paid his own bitter tribute: 'Smith is a young fool who would be capable of invading France with eight hundred men.'

**Richard Hunter**





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